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JULY DIVIDENDS AND INTEREST PAYMENTS.

Disbursements in the South that Will Relieve the Tightness of Money.

The month of July is a period of heavy disbursements by corporations of every character, on account of dividends and interest, and the placing in circulation such a large amount of money at this time is calculated to have a very beneficial effect upon the general business and financial situation. Through its numerous correspondents in every section of the South the MANUFACTURERS' RECORD has ascertained the rate and amount of the July dividends of a large number of banking, railroad and other corporations, and the facts shown by these statistics are of great interest at the present time. From the figures compiled by the MANUFACTURERS' RECORD it is estimated that not less than \$25,000,000 will be disbursed in the South during the present month on account of dividends and interest by national, State and savings banks, trust companies, railroad and street railway companies, insurance companies, mining and manufacturing, water, gas and electric-light companies. Nearly all of this money will go into circulation in the South, and its effects will be very beneficial to business interests at the present time.

The partial dividend list presented below, embracing over 200 corporations, reveals some interesting facts about Southern business, and shows that the banks of the South are earning very satisfactory dividends, even in dull times. Out of 117 banks only eight are paying less than 6 per cent. per annum. Thirty-six are paying 6 per cent. per annum, nine are paying 7 per cent., thirty-two are paying 8 per cent., eighteen pay 10 per cent., six pay 12 per cent., two pay 16 per cent., one pays 18 per cent., and one is paying at the rate of 40 per cent. per annum. These figures, while embracing only a portion of the Southern banks, represent conditions that prevail throughout the South.

In the subjoined lists will be found the rate and amount of dividends and interest paid or to be paid during the present month by several hundred Southern corporations.

BANKING AND OTHER CORPORATIONS.

Maryland.

BALTIMORE.

Drovers and Mechanics' National Bank, 3 per cent. semi-annual, \$500.
Traders' National Bank, 3 per cent. semi-annual, \$650.
American National Bank, 2½ per cent. semi-annual, \$500.
Merchants' National Bank, 5 per cent. semi-annual, \$75,000.
German Bank, 2½ per cent. semi-annual, \$10,000.
German-American Bank, 3 per cent. semi-annual, \$900.
Equitable National Bank, 3 per cent. semi-annual, \$15,000.
National Bank of Commerce, 2½ per cent. semi-annual, \$7500.
National Howard Bank, 2½ per cent.
Commercial and Farmers' National Bank, 3 per cent. semi-annual, \$12,813.
Western National Bank, 4 per cent. semi-annual, \$20,000.
National Bank of Baltimore, 4½ per cent. semi-annual, \$54,481.50.
Manufacturers' National Bank, 3½ per cent. semi-annual, \$17,500.

Farmers and Merchants' National Bank, 3½ per cent. semi-annual, \$22,750.
National Farmers and Planters' Bank, 5 per cent. semi-annual, \$40,000.
Third National Bank, 3 per cent. semi-annual, \$15,000.
People's Bank, 3 per cent. semi-annual, \$7500.
National Union Bank, 3½ per cent. semi-annual, \$31,500.
National Exchange Bank, 3 per cent. semi-annual, \$18,000.
Citizens' National Bank, 5 per cent. semi-annual, \$25,000.
National Mechanics' Bank, 4 per cent. semi-annual, \$40,000.
Baltimore Dry Dock Co., 4 per cent. semi-annual.
Lake Chrome & Mineral Co., two and a-half cents per share.
American District Telegraph Co., 2 per cent.
Merchants & Miners' Transportation Co., 4 per cent. semi-annual.
Peabody Fire Insurance Co., 5 per cent. semi-annual.
American Fire Insurance Co., 4 per cent. semi-annual.
Howard Fire Insurance Co., 4 per cent. semi-annual.
Maryland Fire Insurance Co., 3 per cent. semi-annual.
George's Creek Coal Co., \$3.00 per share.
Maryland Coal Co., 2½ per cent. semi-annual on preferred stock.

Cumberland—Second National Bank, 6 per cent. semi-annual, \$6000.
Elkton—Second National Bank, 3 per cent. semi-annual, \$1500.
Frederick—Fredericktown Savings Institution, 4 per cent. semi-annual, \$6920.
Frederick—Franklin Savings Bank, 3 per cent. semi-annual.
Annapolis—Annapolis Water Co., 2½ per cent. semi-annual.

WESTMINSTER.

Union National Bank, 5 per cent. semi-annual, \$5000.
Farmers and Mechanics' National, 2½ per cent. for five months, \$1250.

Washington, D. C.

National Capital Bank, \$3.00 per share semi-annual, \$6000.
Columbia Title Insurance Co., 1½ per cent. quarterly.
Washington Gas Light Co., 3 per cent. semi-annual, \$60,000.
Georgetown Gas Light Co., 4 per cent. semi-annual, \$5760.
Masonic Hall Association, 2 per cent. semi-annual.
Atlanta Building Co., 1 per cent. quarterly.
United States Electric Light Co., 2 per cent. quarterly, \$17,500.
National Metropolitan Fire Insurance Co., 4 per cent. semi-annual.
Riggs Fire Insurance Co., 3 per cent. semi-annual.
Real Estate Title Insurance Co., \$3.00 per share.
Corcoran Fire Insurance Co., 3 per cent. semi-annual.
National Union Fire Insurance Co., 10 per cent. semi-annual.
Lincoln Fire Insurance Co., 2 per cent. quarterly.
Capital Trust Co., 1½ per cent. quarterly.
Norfolk & Washington Steamboat Co., 3 per cent.
People's Fire Insurance Co., 3 per cent.

Virginia.

RICHMOND.

First National Bank, 5 per cent. semi-annual, \$30,000.
Union Bank of Richmond, 8 per cent. semi-annual, \$17,480.
Merchants and Planters' Savings Bank, 2 per cent. semi-annual, \$2000.
Merchants' National Bank, 3½ per cent. semi-annual, \$7500.
City Bank, 3 per cent. semi-annual, \$12,000.
Planters' National Bank, 5 per cent. semi-annual, \$15,000.

State Bank of Virginia, 3½ per cent., \$17,500.
National Bank of Virginia, 3 per cent. semi-annual, \$6000.
Savings Bank of Richmond, 3 per cent. semi-annual, \$3000.
Citizens' Bank of Richmond, 3 per cent. semi-annual, \$9000.
Old Dominion Steamship Co., 3 per cent. semi-annual.
Virginia State Insurance Co., 3 per cent. semi-annual.
Guarantee Building & Trust Co., 4½ per cent. semi-annual.
Granite Building Co., 4½ per cent. semi-annual.
Virginia Fire & Marine Insurance Co., 4 per cent. semi-annual.
Home Building Co., 4 per cent. semi-annual.
People's Building, Loan & Trust Co., 4 per cent. semi-annual.
Perpetual Building, Loan & Trust Co., 5 per cent. semi-annual.

LYNCHBURG.

Lynchburg National Bank, 5 per cent. semi-annual, \$12,500.
First National Bank, 4 per cent. semi-annual, \$6000.
Commercial Bank, 4 per cent. semi-annual, \$4000.
People's National Bank, 2½ per cent. quarterly, \$5132.50.
National Exchange Bank, 4 per cent., \$4000.
Bonsack Machine Co., quarterly, \$32,000.

NORFOLK.

Norfolk National Bank, 3½ per cent. semi-annual, \$14,000.
Citizens' Bank, 3 per cent. semi-annual, \$9000.

ROANOKE.

Roanoke Trust, Loan & Safe Deposit Co., 5 per cent. semi-annual, \$12,500.
National Exchange Bank, 3 per cent. semi-annual, \$3000.
Fidelity Trust Co., 4 per cent. semi-annual, \$8000.

BEDFORD CITY.

Liberty Building & Loan Co., 4 per cent. semi-annual.
First National Bank, 4 per cent. semi-annual and \$2000 surplus.
Alexandria—First National, 3½ per cent. semi-annual, \$3500.
Newport News—Citizens' and Marine Bank, 3 per cent. semi-annual, \$1500.
Staunton—Augusta Building & Loan Association, 3½ per cent. semi-annual.

Louisiana.

NEW ORLEANS.

New Orleans Canal & Banking Co., quarterly dividend of \$4.00 per share, \$40,000.
New Orleans National Bank, \$20.00 per share semi-annual, \$85,000.
Germania Savings Bank, \$4.00 per share semi-annual, \$12,000.
Metropolitan Bank, 4 per cent. semi-annual, \$10,000.
New Orleans Gas Co., \$3.00 per share semi-annual, \$111,500.
St. Charles Hotel Co., 5 per cent.
Teutonia Insurance Co., 5 per cent. semi-annual.
New Orleans Insurance Co., 5 per cent.
Union National Bank, \$4.00 per share semi-annual, \$20,000.
Hibernia National Bank, 5 per cent. semi-annual, \$15,000.
People's Bank, 4 per cent. semi-annual, \$12,000.
Germania National Bank, 5 per cent. semi-annual, \$15,000.
American National Bank, \$3.00 per share, \$6000.
Mutual National Bank, \$2.00 per share semi-annual, \$6000.
State National Bank, 4 per cent. semi-annual, \$17,000.
New South Building and Loan Association, 5 per cent. semi-annual.

Baton Rouge—First National Bank, 4 per cent. semi-annual, \$4000.
Donaldsonville—Bank of Donaldsonville (one year old), 8 per cent. annual, and 8 per cent. to surplus—total \$8000.
Thibodaux—Bank of Thibodaux, 10 per cent. annual, \$2500.

Florida.

Pensacola—First National Bank, 6 per cent. semi-annual, \$3000; also carried \$10,000 to reserve fund.

North Carolina.

Raleigh—Commercial and Farmers' Bank, 4 per cent. semi-annual, \$4000, and \$10,000 added to surplus.
Concord—Perpetual Building Association, 11 per cent. annual.

West Virginia.

Wheeling—Mutual Savings Bank, 4 per cent. annual.
Charleston—Citizens' National, 4 per cent. semi-annual, \$5000.

Texas.

GALVESTON.

American National Bank, 4 per cent. semi-annual, \$24,000.
First National, 6 per cent. semi-annual, \$18,000.
Galveston National, 3 per cent., \$15,000.
Galveston Savings Co., 4 per cent. semi-annual.
Citizens' Loan Co., 3½ per cent. semi-annual.
Texas Trust Co., 4 per cent. semi-annual.
Improvement & Loan Co., \$4.00 per share semi-annual.
Houston—Commercial National Bank, 4 per cent. semi-annual, \$8000.

Kentucky.

LOUISVILLE.

Louisville Trust Co., 2 per cent. quarterly, \$16,000.
Kentucky Title Co., 3 per cent. semi-annual.
Union National Bank, 3 per cent. semi-annual, \$22,500.
Columbia Finance & Trust Co., 2 per cent. quarterly, \$10,000.
Louisville Banking Co., 3 per cent. quarterly, \$15,000.
Farmers and Drovers' Bank, 2 per cent. quarterly, \$6034.
Louisville Deposit Bank, 3 per cent. semi-annual, \$15,000.
People's Bank of Kentucky, 3 per cent. semi-annual, \$4500.
Third National Bank, 4 per cent. semi-annual, \$16,000.
Merchants' National Bank, 3 per cent. semi-annual, \$15,000.
German Bank, 9 per cent. semi-annual, \$27,000.
German Insurance Bank, 5 per cent. semi-annual, \$12,275.
Western Bank, 4 per cent. semi-annual, \$10,000.
Ohio Falls Car Manufacturing Co., 2 per cent. on preferred stock, payable in gold.
German National Insurance Co., 3 per cent. semi-annual.
Western Insurance Co., 4 per cent. semi-annual.
Little Falls Improvement Co., 2½ per cent. quarterly.
Alexandria Building Co., 2½ per cent. quarterly.
German Insurance Co., 3 per cent. semi-annual.
Birmingham Rolling Mill Co., 3½ per cent. semi-annual.
Covington—Covenant Loan Association, 15 per cent. semi-annual.

South Carolina.

CHARLESTON.

First National, 6 per cent. semi-annual, \$12,000.
Bank of Charleston, 3 per cent. semi-annual.
Exchange Banking & Trust Co., \$3.00 per share semi-annual, \$6000.
People's National, \$5.00 per share semi-annual, \$12,500.
South Carolina Trust Co., \$2.50 per share semi-annual, \$6250.
Hibernia Savings Institution, \$6.00 per share, \$1800.
Dime Savings Bank, \$4.00 per share semi-annual, \$1000.
Miners and Merchants' Bank, \$3.00 per share, \$3000.
Charleston Gas Co., seventy-five cents per share.

COLUMBIA.

Loan and Exchange Bank, 4 per cent. semi-annual, \$5080.
Central National Bank, 4 per cent. semi-annual, \$4000.

Georgia.

ATLANTA.

Commercial Travelers' Savings Bank, 10 per cent. annual, \$5000.
Lowry Banking Co., 4 per cent. semi-annual, \$14,000.

MACON.

Central Georgia Bank, 3 per cent. semi-annual, \$3000.
Progress Improvement & Manufacturing Co., 3 per cent. semi-annual.

SAVANNAH.

Chatham Bank, 3 per cent. semi-annual, \$4500.
Southern Bank of the State of Georgia, 5 per cent. semi-annual, \$25,000.
Germania Bank, 3 per cent. semi-annual, \$6000.
Merchants' National Bank, \$3.00 per share semi-annual, \$15,000.
National Bank of Savannah, \$3.50 per share semi-annual, \$8750.
State Southern Bank, 5 per cent. semi-annual, \$35,000.
Citizens' Bank, \$3.00 per share semi-annual, \$15,000.
Savannah Trust Co., \$3.00 per share semi-annual, \$12,000.
Oglethorpe Savings Co., 3 per cent. semi-annual, \$3750.
Savannah Electric Co., \$3.00 per share semi-annual, \$6000.

MONROE.

Telegraph and Telephone Association, (one year old, 18½ per cent. annual.

COLUMBUS.

Third National Bank, 3½ per cent., \$3500.
Columbus Savings Bank, \$4125.
Merchants and Mechanics' Bank, 4 per cent., \$6000.
Chattahoochee National Bank, 3 per cent. semi-annual, \$3000.
National Bank of Columbus, 5 per cent. semi-annual, \$5000.
Georgia Home Savings Bank & Insurance Co., 3 per cent. quarterly, \$9000.

TENNESSEE.

Chattanooga—Chattanooga National Bank, 3 per cent. semi-annual, \$9000.

MEMPHIS.

State National Bank, 5 per cent. semi-annual, \$12,500.
Memphis State Savings Bank, 3 per cent. semi-annual, \$1500.

NASHVILLE.

Union Stockyards, 1 per cent. quarterly.
Tennessee Coal, Iron & Railroad Co., 4 per cent. semi-annual on preferred stock.

ALABAMA.

MOBILE.

People's Bank, 10 per cent., \$15,000.
Stonewall Insurance Co., 10 per cent.

BIRMINGHAM.

City National Bank, 6 per cent. semi-annual, \$6000.
Alabama Home Building Association, 4 per cent. semi-annual on special stock, and 3 per cent. on paid stock.

Bridgeport—Bridgeport Investment Co., 2 per cent. semi-annual.
Anniston—Anniston Bank, 8 per cent. annual, \$7200.

MISSISSIPPI.

Vicksburg—People's Saving Bank, 4 per cent. semi-annual, \$2000, and \$3000 added to surplus.

RAILROADS AND STREET RAILWAYS.

Northern Central, 4 per cent. semi-annual, \$300,722.
Georgia Railroad, \$115,000. All of this but \$5000 is paid to citizens of Georgia.
Baltimore & Ohio Railroad, 3 per cent. on first and second preferred stock, \$150,000.
Norfolk & Southern, 1 per cent. quarterly, \$20,000.
Richmond, Fredericksburg & Potomac, \$3.50 per share, \$58,355.50.
Petersburg Railroad, \$3.00 per share, \$38,529.
Richmond & Petersburg, \$3.50 per share, \$35,000.
Charleston Northeastern, 3 per cent.
Washington Metropolitan, 2 per cent. quarterly.
New Orleans & Carrollton, \$1.50 per share quarterly, \$12,000.
Orleans Railroad Co., 2 per cent. quarterly.
New Orleans & Lake Railroad, \$1.75 per share.
Baltimore City Passenger, \$1.00 per share.
New Orleans Traction Co., 3 per cent. semi-annual.
Charleston City Railroad, \$2.00 per share.

INTEREST PAYMENTS.

Railway Bonds.

Alabama Great Southern, \$52,500.
Arkansas Midland 6s, \$3900.
Atlanta & Charlotte, \$148,750.
Austin & Northwestern, \$51,120.
Baltimore & Lehigh 4s, \$17,000.
Baltimore & Ohio regular 4s, \$11,590.
Baltimore & Ohio equipment 4½s, \$28,125.
Baltimore & Ohio city of Baltimore 6s, \$9600.
Baltimore & Ohio Virginia branch 6s, \$4200.
Baltimore & Ohio Pittsburg & Connellsville 7s, \$140,500.
Baltimore & Ohio Pittsburg & Connellsville 6s, \$197,034.
Baltimore & Potomac 6s, \$45,000.
Baltimore & Potomac consolidated 5s, \$75,000.
Baltimore & Ohio Southwestern 7s, \$11,655.
Baltimore & Ohio Southwestern 4½s, \$240,007.
Carolina Central 6s, \$141,000.
Central Railroad of South Carolina 6s, \$9000.
Charleston, Cincinnati & Chicago 5s, \$91,812.
Charleston & Savannah 7s, \$51,345.

Charlotte, Columbia & Augusta 7s, \$70,000.
Charlotte, Columbia & Augusta 6s, \$15,000.
Chesapeake & Ohio purchase 6s, \$68,610.
Chesapeake & Ohio purchase 4s, \$20,000.
Chesapeake & Ohio purchase 2s, \$50,000.
Chesapeake & Ohio purchase 3s, \$15,000.
Chesapeake & Ohio Craig Valley 5s, \$16,250.
Chesapeake & Ohio equipment 6s, \$20,550.
West Virginia Central & Pittsburg 6s, \$90,000.
Western Maryland 6s, \$73,269.
Western Maryland 5th mortgage 3¼s, \$27,690.
Western Maryland city loan, \$10,690.
Western North Carolina 6s, \$111,680.
Wilmington & Weldon 7s, \$32,700.
Wilmington & Weldon general mort. 5s, \$75,000.
Vicksburg, Shreveport & Pacific 6s, \$120,000.
Vicksburg, Shreveport & Pacific 4s, 5s, 3s, \$33,164.
Virginia Midland 6s, \$12,651.
Silver Springs, Ocala & Gulf 6s, \$33,300.
South Carolina 5s, \$2077.
South Florida 6s, \$67,680.
Savannah, Americus & Montgomery 6s, \$100,500.
Savannah, Americus & Montgomery 7s, \$12,250.
Savannah, Florida & Western 4s, \$60,000.
Savannah, Florida & Western 7s, \$62,300.
Seaboard & Roanoke 5s, \$35,000.
Raleigh & Augusta 6s, \$40,000.
Raleigh & Gaston 8s, \$40,000.
Richmond, York River & Chesapeake 8s, \$16,000.
Richmond, Fredericksburg & Potomac dollar loan, \$5181.
Richmond, Fredericksburg & Potomac 5s, \$1433.
Port Royal & Augusta first mortgage 6s, \$10,860.
Port Royal & Augusta general mortgage income 6s, \$45,000.
Port Royal & West. Carolina 7s, \$22,050.
Petersburg 8s, \$149,000, \$5960.
Petersburg 5s, \$693,000, \$17,325.
Paducah, Tennessee & Alabama 5s, \$2,240,000, \$86,500.
Northern Central 6s, \$214,160.
Baltimore Union Railroad first mortgage 6s, \$27,000.

New Orleans & North East 6s, \$15,000.
Norfolk & Western deb. 6s, \$15,750.
Norfolk & Western 5s, \$249,125.
Norfolk & Western 8s, \$19,840.
Norfolk & Western South Side first pref. cou. m. 5, 6 and 8, \$9700.
Norfolk & Western Virginia & Tennessee Enlarged m. 5s, \$44,346.
Norfolk & Western Virginia & Tennessee 8s, \$40,000.
Norfolk & Western Virginia, Mary. & Wash. 5s, \$176,250.
Norfolk & Western Virginia gold car trust 5s, \$22,500.
Fort Worth & Rio Grande 5s, \$73,082.
Fort Worth & D. C. 5s, \$5,625.
Gal., Har. & San Antonio 6s, \$190,620.
Georgia, Carolina & Northern 5s, \$134,000.
Georgia Midland & Gulf 6s, \$44,820.
Georgia Railroad & Banking Co. 6s, \$69,000.
Georgia Railroad & Banking Co. 5s, \$5000.
Louisville & Nashville N. O. & M. first mortgage 6s, \$150,000.
Louisville & Nashville N. O. & M. second mortgage 6s, \$30,000.
Louisville & Nashville unified mortgage 4s, \$232,640.
Louisville & Nashville Louis., Cin. & Lex. first mortgage 7s, \$99,750.
Louisville & Nashville Kent. Cent. 7s, \$14,000.
Louisville & Nashville new mortgage 4s, \$130,460.
Louisville & Nashville Bon Air 6s, \$3,900.
Louisville & Nashville Duck River first mortgage 8s, \$3,440.
Louisville & Nashville Decatur guaranteed 7s, \$73,500.
New York, Philadelphia & Norfolk 6s, \$55,440.
Little Rock & Fort Smith 7s, \$81,900.
Louisiana Western 6s, \$67,200.
Jacksonville, Tampa & Key West 6s, \$46,980.
Florida Central & Peninsular first mortgage 6s, \$75,000.
Florida Central & Peninsular land grant 5s, \$428,000, \$10,700.
Houston & Texas Central 5s, \$183,375.
Nashville, Chattanooga & St. Louis 7s coupon, \$220,500.
Nashville, Chattanooga & St. Louis 6s, \$30,000.
Nashville, Chattanooga & St. Louis 6s on F. & McM. branch, \$22,500.
Nashville, Chattanooga & St. Louis, Lebanon branch, \$9,000.
Nashville, Chattanooga & St. Louis 8s, Jasper branch, \$3,600.
Nashville, Chattanooga & St. Louis 6s, Jasper branch, \$11,130.
Nashville, Chattanooga & St. Louis, Centreville branch, \$11,280.
Nashville, Chattanooga & St. Louis, Tennessee C. & I. Co. R. R. 6s, \$17,400.
East Tennessee, Virginia & Georgia semi-annual 7s, \$109,305.
East Tennessee, Virginia & Georgia semi-annual 5s, \$839,150.
Alabama Central semi-annual 6s, \$30,000.
Knoxville & Ohio semi-annual 6s, \$60,000.

Miscellaneous Bonds.

Maryland State, \$140,024.78.
Baltimore United States Electric Co. 6s.
Baltimore Security Trust Co. 6s.
Baltimore Physicians and Surgeons' coll. 6s.
Baltimore city hall loan, \$22,500.

Baltimore funding loan, \$12,000.
Baltimore 3½s 1930, \$87,500.
Baltimore park fund, \$2785.86.
Baltimore sewer fund, \$12,000.
Tennessee State 3s, 5s, 6s, \$231,000.
Decatur (Ala.) Light Co. 6s.
Shreveport (La.) Light Co. 7s.
Wytheville Light Co. 6s.
Columbus (Ga.) water 5s.
Salisbury (N. C.) water 5s.
Raleigh (N. C.) 5s.
Watauga water 6s.
Monticello Dist. Co. 6s.
Berryville water 6s.
Charleston (S. C.) 4s.
Charleston cotton mills coupon.
Charleston Otranto Club coupon.

The Need of Improving Our Cotton.

By Edward Atkinson.

A complaint which has been made by Southern cotton-growers of the free and unrestricted importation of cotton from Peru and Egypt is due to their want of information rather than to anything else. It is alleged in a circular that has been sent to me that Egyptian and Peruvian cotton have not only adversely affected the Sea Island production, but have also disastrously affected the value of the good and extra staple product of the Mississippi valley. Whether these assertions be true or false it matters little practically. This substitution is mainly in England and France. Whatever has occurred in the substitution of Egyptian and Peruvian cotton for Sea Island, or for Bend or any other extra staple cotton of Southern growth, has been but a part of the recent progress in spinning the cotton after it is baled, and of the yet greater progress in preparing the cotton before it is baled. These changes in the use of the staple are mainly due to new inventions and better processes.

The Egyptian cotton is a black-seed variety of shorter and more uniform staple than the Sea Island cotton, but longer and better than either upland or Gulf or Bend cotton. It is ginned carefully with a roller gin, else it would be cut and destroyed as a large part of the extra-staple or long-staple cotton of the green-seed or upland variety of this country is now cut and destroyed by the saw gin. Egyptian cotton is of very uniform quality and is very free from leaf or storm injury, because it is gathered without danger of rain or storm, and is very carefully handled, baled and protected. Its substitution for Sea Island for a great many purposes is, however, mainly due to the application in Great Britain and France of the machine known as a comb in place of the carding engine, by which operation all the short staple is combed out to be made use of for other purposes, under the name of "noils," while the long staple is drawn in perfect uniformity, to be converted into the fine yarns which, under the former methods, could only be made from the Sea Island cotton. Down to a very recent period these processes of combing and preparing the cotton had not been introduced in this country. They were conducted wholly in England and in France, where the growers of American cotton are powerless to protect themselves against such competition except by improving their own methods. Even if any tariff protection or other similar method would be of any service here, it could have no effect abroad. It is only within about ten years that these medium fine yarns have been produced in this country. This has been made possible by the introduction of the English combing machinery and the import of Egyptian cotton.

The Sea Island variety is still too costly for the purposes to which the Egyptian is put, and the extra-staple green-seed or upland cotton has never been properly prepared by the grower for such purposes in any sufficient quantity.

Whatever may be the rights of the matter in respect to tariff duties on cotton fabrics, a tariff or duty upon Egyptian and Peru-

vian cotton would only be a snare set by the ignorant for their own destruction. It would utterly prevent the growth of the fine spinning in this country, because the extra staple cottons (except only the Sea Island) of this country are as yet so ill prepared in the gin and in the press as to be practically unsuitable for the purposes to which the Egyptian cotton is now put. They may be used under present conditions for strong and medium but not for fine yarns, and for such purposes they have the preference. The Peruvian cotton meets another need, not, however, to any great extent in this country. It is a very woolly cotton, and is used almost exclusively in the preparation of yarns for hosiery.

Whether or not the Egyptian variety of cotton can be successfully produced in this country remains to be proved. Many years ago I imported from Egypt a quantity of the seed of the *Bahmiah* variety of Egyptian cotton, a type which grows upright without much branching and produces its bolls very close to the main stalk. It was tried with success in gardens in Galveston, Texas, but it never obtained any standing as a field crop—I suppose for want of the kind of attention which every new variety of cotton requires. All long-staple cottons should be grown apart, so as not to mix with other varieties, and should be kept entirely separate and distinct in packing and baling, for the reason that a mixed bale of cotton of long and short staple is a nuisance in a factory. It neither serves the purpose of one or the other. Perhaps you would be surprised at the number of samples of long cotton that have been submitted to me which were worthless on account of this mixture of long with short or cut and broken staple.

Again, if a good variety of long-staple cotton or even of extra-staple cotton is ginned according to the common practice upon the saw gin, it is so deteriorated as to be worth less than a short-staple cotton of even quality. In point of fact, I must repeat once again what I have so often had occasion to say. There is no important staple product of the world which is deteriorated so much after it has been successfully grown as the cotton of this country. It is, as a rule, when compared to any high or true standard of treatment, badly ginned, badly packed, worse baled and wastefully treated from the time it leaves the hand of the picker until it reaches the warehouse of the mill in which it is to be spun.

No tariff and no system of artificial protection would tend to promote the interest of the Southern cotton-grower. It would only retard progress both in manufacturing and in growing. What is needed is greater attention to keeping long-staple cotton, either of the green-seed or black-seed variety, by itself in the field in which it is grown, and to right methods of ginning upon a roller gin—not under any circumstances upon a saw gin. There will then be a reasonable prospect of competing in England and in France with Egyptian cotton; otherwise there will be no successful competition in that particular branch of work to which the Egyptian cotton is so well adapted.

While Egypt cannot compete with our Southern States in quantity of product, yet it would be well for Southern cotton-growers to bear in mind that under English rule the condition of agriculture has been vastly improved in Egypt. By the restoration of old works of irrigation or the construction of new ones it is probable that within a very short time 1,000,000 bales of 550 pounds each will be added to the product of Egypt in the shape of cotton grown under scientific direction, handled with absolute perfection, baled as it should be, and protected from waste from the time it is gathered in the field until it is delivered at the factory. In order to compete Southern cotton-growers will be compelled to adopt similar methods.

There is one section of the earth's surface which may hereafter compete with our Southern States in quantity as well as quality, and that is in the Argentine Republic, on the Paraguay and Parana rivers. Whenever good government and sound finance shall be established in that section, the handling and baling of our Southern cotton will be improved under the stress of an urgent competition to which our cotton-growers have never yet been subjected.

The Argentine Republic is now going through the preliminary phase which will lead to safe and sound conditions of finance, and to a real instead of sham prosperity. This section of almost unlimited capacity in the production of wheat and cotton has during the last few years been subjected to a speculative boom of the most obnoxious kind. It is on a silver basis depraved by paper currency; two evils, each bad enough in itself. In spite of these adverse influences its products are increasing, and it will ultimately become one of the most productive sections of the world. In respect to cotton it possesses almost a perfect climate and a soil exactly adapted to producing an even staple.

In respect to wheat a comparison may be made by comparing the growth of the grasses of the pampas with the Buffalo grass of our Western prairies. The Buffalo grass will bear the stress of roaming herds of light-weight animals without being destroyed; it will not bear heavy and continuous cropping by herds of cattle which tread it out of existence. The pampas grass grows so high and so strong that it will bear continuous cropping by herds of the heaviest cattle.

It behooves both the South and the West to mend their ways, to vary their crops, to perfect their methods of preparing cotton, corn and every other product so as to meet the demands of every part of the world, else they may hereafter be distanced in their competition with other fertile sections of the earth's surface.

In respect to Peruvian cotton I am not as well informed as upon Egyptian. I believe the facts are as follows:

The cotton grows in Peru at a high altitude where there is just a sufficient amount of moisture to establish the plant, followed by a hot and customarily dry season, in which the crop matures. Now it will be remarked that cotton varies in the number of convolutions or twists in each fibre. It is by the interlocking of these convolutions that we are enabled to spin cotton. Under the conditions of Peru the fibre takes on an excessive twist, which gives it a woolly appearance, so that when it is put into the market its price varies with the price of wool rather than with the price of cotton, as it is used mainly in the production of hosiery or knit goods made of cotton and wool combined. I believe that Peruvian cotton is never used in the ordinary types of cotton fabrics.

If such are the conditions, then we have in one section of our country a counterpart of the conditions very successfully producing this staple. The Panhandle of Texas, "or Llano Estocado," is, I believe, about 6400 feet above the sea level. The conditions of climate and humidity are partly derived from the currents of air that come up from the west. It has a moderate rainfall at the right time for establishing the cotton plant, and it has the long dry season, in which the Peruvian cotton might mature as it does in its native habitat.

This section has lately proved to be exceedingly valuable for the production of wheat and of fruit where it had heretofore been supposed that the land was fit only for grazing. If to these crops a variety of cotton corresponding to Peruvian cotton can be added another element will be established of value to the community. It would be another judicious work on the part of the Department of Agriculture to develop

Egyptian and Peruvian cotton in certain sections of the country.

So far as I can obtain information, the right section for the Egyptian cotton would be in Cameron county, in the southeastern part of Texas, where very excellent crops of Sea Island cotton are being raised of very uniform quality and of much larger quantity per acre than on the Sea Islands themselves. Care should, of course, be taken in both instances to keep the crop of the Egyptian and the crop of the Peruvian cotton separate and distinct from all others. It may also be suggested that if no experiments have yet been made in the introduction of the Argentine breed of sheep in the Southern States, attention might be called thereto. Upon this subject I have absolutely no information, merely learning by hearsay that the wool of our Northern breeds of sheep deteriorates in the South and becomes hairy. This much is certain—that the sheep of the pampas produce a very fine and full fleece of what is known as "Mestiza" wool under conditions closely corresponding to the conditions of our own cotton fields. If that breed of sheep could be introduced upon the cotton field, alternating wool and cotton from the same field year by year, the land would be kept in good condition, the crop of cotton would be increased and the addition of the wool product would again vary the resources of the Southern States.

I venture upon these suggestions merely from such theoretical knowledge as I have obtained by the long study of food and fibres without practical experience of my own in producing either.

Since writing the above I have obtained later information from an importer of Peruvian cotton, of which I enclose a sample. It is grown at a high altitude and it matures in a dry season. It is the product of a perennial shrub or tree, not of an annual plant. The quantity varies according to the amount of rain during the growing season, ranging from a maximum of 50,000 bales to a minimum of 12,000 or 15,000 bales. E. A.

Two New Companies at Norfolk.

Judge Brooke, of Norfolk, Va., has granted a charter to the Norfolk Land & Savings Co., which purposes to deal in real estate, bonds and securities, receive money on deposit and engage in manufacturing enterprises. The capital stock is not to be less than \$5000 nor more than \$10,000, in shares of \$10.00 each. The real estate to be held is not to exceed 1000 acres in the counties of Princess Ann and Norfolk, Va. The officers of the company are Robert W. Mallett, president; W. C. Cobb, vice-president; H. T. Smith, secretary; Aaron Milhado, treasurer. The above, with E. E. Dawes, comprise the board of directors.

A charter has also been granted the National Park Co., the purposes of which are to deal in real estate, borrow money and secure same by mortgage or deed of trusts thereon, the quantity of land to be held not to exceed 500 acres. The capital stock is not to be less than \$60,000 nor more than \$100,000 in shares of \$100 each. The principal office is to be at Norfolk. The officers of the company are as follows: Nathaniel Burruss, president; H. L. Smith, vice-president; Dr. Henry Smith, secretary and treasurer. The above, with Edward Spalding and H. Tyler Smith, all of Norfolk, comprise the board of directors.

THE Camden (Ark.) Commercial Club has effected a permanent organization, the following officers having been elected: J. W. Brown, president; W. W. Watts, vice-president; A. Felsenthal, secretary, and J. W. Holleman, treasurer. The business interest of the city will be the especial care of the organization, every merchant having become a member of it.

The South at the World's Fair.

[From a Staff Correspondent.]

OFFICE MANUFACTURERS' RECORD, 535 "THE ROOKERY," CHICAGO, July 3.

There are some people at the World's Fair who unhesitatingly assert that, so far as any benefit to that vast section of the Union commonly called the South is concerned, the fair had better never been held. This is a mistake. There will be two results out of which the South will be the gainer. One, which I have already pointed out in this correspondence, will be the general awakening which will occur when the Southern people find out how their country has made itself conspicuous by its absence only, and when they see how better returns are had from advertising a country's resources than even those to be had from advertising, for instance, patent medicines. In other words, that the public must be informed and convinced of the merits of regions and resources as well as of the merits of merchandise and medicines before investing in either.

The other benefit to the South which will flow from the Columbian Exposition will grow out of the increased patriotism—love of and pride in our entire country—and the broadening of men's minds, which the exposition is effecting in a variety of ways.

There was a time when the writer thought it a calamity to the South that the exposition was not located at Washington city, but after witnessing the stupendous results which Western enterprise has here accomplished and feeling the effects of the spirit of liberality and big-mindedness which pervades the atmosphere at Chicago, I have come to the conclusion that the exposition was held precisely at the right place. The Chicago people are primarily proud of Chicago. Secondly they are proud of America. The people of the East—and most of all the pap-fed population of the nation's capital—are too much wrapped up in their own schemes to be reached by such a sentiment as patriotism or pride in native land. The very foreign-born population of Chicago is more patriotic than are even the "Sons of the Revolution" in the self-satisfied East. The wonderful growth of Chicago—the magnificent and colossal materialization of the Columbian idea—foster a tendency to exclaim: "What a great country is ours!" Who ever heard any utterance given to such a sentiment in Washington or in Baltimore or in Philadelphia or in New York?

It is this kind of spirit whose expansion will do the most for the settlement and development of the South; and as there are more Western than Eastern visitors to the World's Fair, a stronger band of brotherhood between the West and the South may be expected from now on. There are going to be many thousands of Western husbandmen soon seeking homes in Dixie. They are the kind of immigrants the South wants. They are the kind who will from the very start feel at home in the South. They will not pine their lives away with nostalgia, because they have learned how to adapt themselves to new environments.

This spirit of all-round love of country will make people ashamed to acknowledge that they were ever so narrow-minded, so enslaved by groveling prejudices, as to have become blind to substantial opportunities for bettering their conditions. There are a great many people at the Northwest who will come to the exposition "dead set" against the South and go away purged of all such prejudice. Not that they will see many things from the South, but they will meet a good many Southern people, who they will discover to be gentle-mannered, correct-thinking, true-hearted men and women, and not swashbucklers, kuklux nor cut-throats.

However, even such as fail to come in contact with Southern visitors will go away

enlightened and liberalized by the very atmosphere of the World's Fair and imbued with a spirit of pan-Americanism.

One of the great natural laws which is apt to be oftenest forgotten is that reaction is always equal to action—that pendulums swing back. The loyalty of the Southern people to the general interests of the whole country is in my honest judgment a truer and more sincere and more deep-rooted loyalty than that of any other section. They are a people who do nothing by halves. They either hate or love. Once upon a time they got mad with the Union and tried to destroy it. Failing in establishing a confederacy of their own, they returned to the Union. Having returned to it, they have grown to consider it their Union as much as they consider the States in which they live their States. The emotional pendulum has swung back.

The people of the South are ambitious now to see their part of our common country hold the place it deserves in the procession of progress. They know that additional industrious white population is the one thing needful, and they are going to have it. There has been a wonderful development in mining and manufacturing during the last decade. The next will be remarkable for agricultural improvement, for an immigration of farmers. The improvement will be in the direction of diversified crops. The immigration will be of sturdy Westerners, who will have become convinced that there is more profit from grain and stock and cotton than from grain or stock-raising alone; who will have become convinced that the South is as much a land of law and order and God and morality as the East or the North or the West; who will become convinced that the negro is the farmer's ally and not his enemy.

THOMAS P. GRASTY.

Contract Awarded for the Improvement of Colbert Shoals.

The contract for the lock at Colbert Shoals, on the Tennessee river, has been awarded to Prof. W. V. Henry, of Birmingham, Ala. The bids for the construction of the monster lock on the proposed Colbert Shoals canal below Tennessee, Ala., called for estimates on a lock 575 feet long, eighty feet wide and a 25-foot lift. There were ten bidders, the three lowest being Tere A. Clark, Quincy, Ill., \$305,767; Dunn LaMaude & Co., Birmingham, \$320,119, and Prof. M. V. Henry, Birmingham, \$345,342. The canal when completed will cost \$3,000,000, and the money for the work is all available. The work on the lock will begin within two weeks, and the contract calls for its completion within two and a-half years. The canal will begin twenty-two miles below Florence, and the lock will be at the lower end, thirty miles below that city. This canal will make the Tennessee river navigable from its mouth to Chattanooga at all seasons of the year and in all stages of water.

Southern Bank Changes.

Recent Southern bank changes are the following:

Llano, Texas.—First National Bank, T. W. Kellogg elected president, and W. S. Dartand, cashier. Banking firm of Kellogg, White & Co. will close up its affairs.

Ocala, Fla.—Merchants' National Bank, E. P. Dismukes, president; W. M. Munroe and Charles Rheinauer, vice-presidents; R. B. McConnell, cashier.

Richmond, Va.—The National Bank of Virginia, George L. Christian, president; James T. Gray, vice-president.

Helena, Ark.—First National Bank, Jacob Trieber, vice-president.

Shreveport, La.—Commercial National Bank, S. Levy, Jr., vice-president; J. H. Ross, assistant cashier.

Uvalde, Texas.—First National Bank, J. F. Simpson, vice-president.

TEXTILES.

[A complete record of new textile enterprises in the South will be found in the Construction Department, on page 424.]

An Interesting Textile Exhibit.

An exhibit which has attracted universal attention at the World's Fair is that pre-

sents the miniature cotton mill by the exhibition of a pair of its latest pattern duplicate part machines, which, it is claimed, will not only do good work, but a lot of it.

The first of the illustrations shows its new pattern two-section breaker lapper with automatic feeder and countershaft attached. The second illustration shows a single-section finisher lapper to match the

tained within the casing (marked 1893 in cut), keeping them out of the natural dirt arising from the cleaning of the stock and thus not impairing their freeness to work effectually at all times.

The horizontal cone arrangement, plainly shown in the second illustration, for varying the speed of feed rolls according to the varying of the sheets of cotton passing

end of finisher, and man in the act of doffing the lap, illustrating the Clayton patent lap roll and steel skewer, controlled by the company. The saving in waste alone will pay for changing of old pickers to this system in a very short time.

Courtenay Manufacturing Co.'s Mill.

The Courtenay Manufacturing Co., which is to build a mill near Seneca, S. C., is progressing rapidly with its preliminary work. Site has been selected two and a-half miles east of Seneca and a branch railroad has been built to it from the Richmond & Danville Railroad under the direction of the railroad company's own engineer. The dam, gates, wheel-pit and foundations, all to be solid stone work and excavated to bed rock, have been contracted for, and quarries to supply the stone will be opened on the bank of the river opposite. Brick machines using clay found in the vicinity are already at work making the brick for the buildings. A number of cottages for the workmen have been erected, and a large number for the use of the operatives will be built in the fall. Natural springs will afford ample water supply, and the village will be known as Courtenay. The mill building will be four stories high, 245x75 feet, and contract has been let for a complete equipment of the very latest spindles, looms and other machinery.

Southern Textile Notes.

THE affairs of the Big Falls Cotton Mills, of Big Falls, N. C., have been placed in the hands of receivers by decision of Judge Winston, of Raleigh. Messrs. James A. Long, of Graham, and A. C. Springs, of Charlotte, were named as receivers. Between \$85,000 and \$100,000 is the company's indebtedness, but it is said that the assets will cover it all.

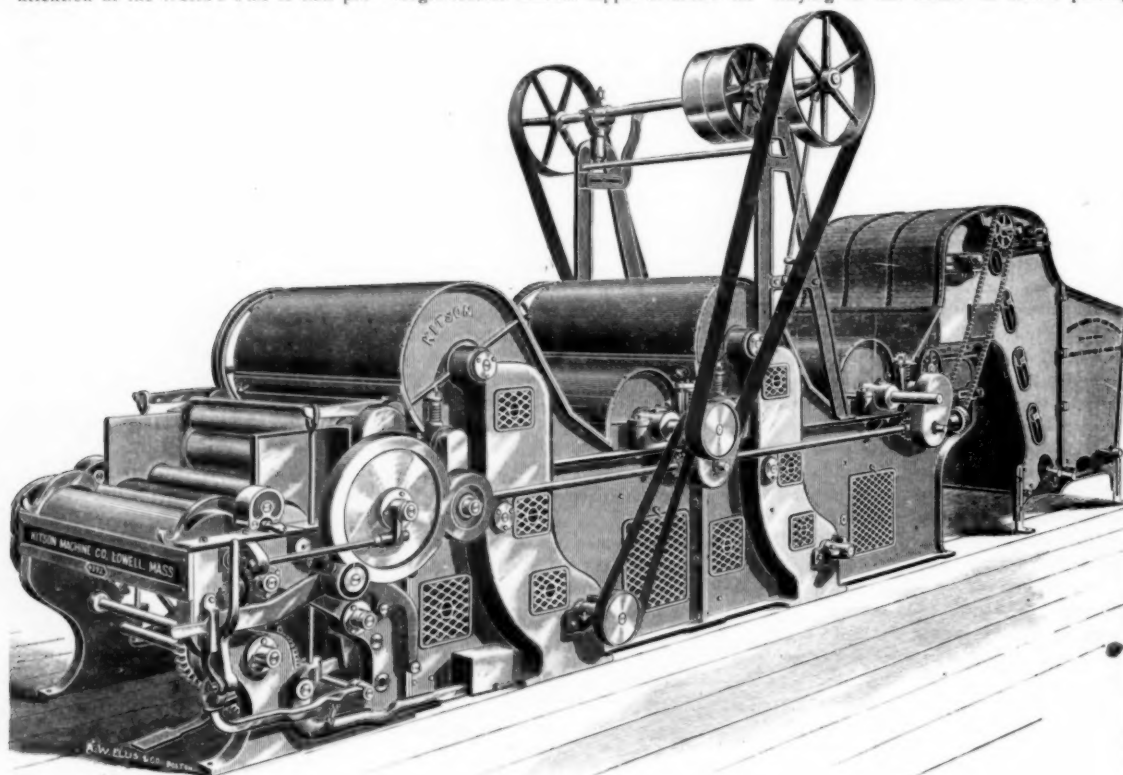


FIG. 1.—TWO SECTION BREAKER LAPPER WITH AUTOMATIC FEEDER.

sented by the combined efforts of the Kitson Machine Co., Lowell Machine Shop and the Boott Cotton Mills, of Lowell, Mass. These companies have combined their products, and the result is a complete cotton mill, where the visitor sees the process of manufacturing from the cotton in the bale to the finished work. The Boott Cotton Mill furnished the cotton in the bale, the Lowell Machine Shop the carding, drawing, spinning and weaving machinery, and the Kitson Machine Co. the machinery to prepare the cotton, consisting of a Kitson breaker with a new feeder and one finishing picker.

Apart from the interest which everyone feels in the examination of fine machinery, there is presented here an opportunity to see the manner in which a first-class New England cotton mill carries on the various operations, from first treating the raw cotton to turning out the finished material. This engages the attention of the ordinary consumer of cotton fabrics, to whom all the processes are more or less mysterious, but particularly interests visitors with some knowledge of the operations. The cotton manufacturer of the Continent of Europe may here see the methods that are here employed in the best mills of the country which produces the cotton fibre. The Englishman from Lancashire may perceive in what manner the American has advanced, so that he now no longer fears the rivalry of Lancashire, and the manufacturer from our own Southern States may find here a model of the machinery used by his competitors in the New England States.

In the equipment of all cotton mills, whether large or small, machinery for opening, cleaning and lapping cotton as it comes in the bale from the South is a necessity for the subsequent operation—carding. The time has come and gone for asking how much will a machine do per ten hours, but how will it do it, and the Kitson Machine Co., well known as a builder of cotton preparing machinery,

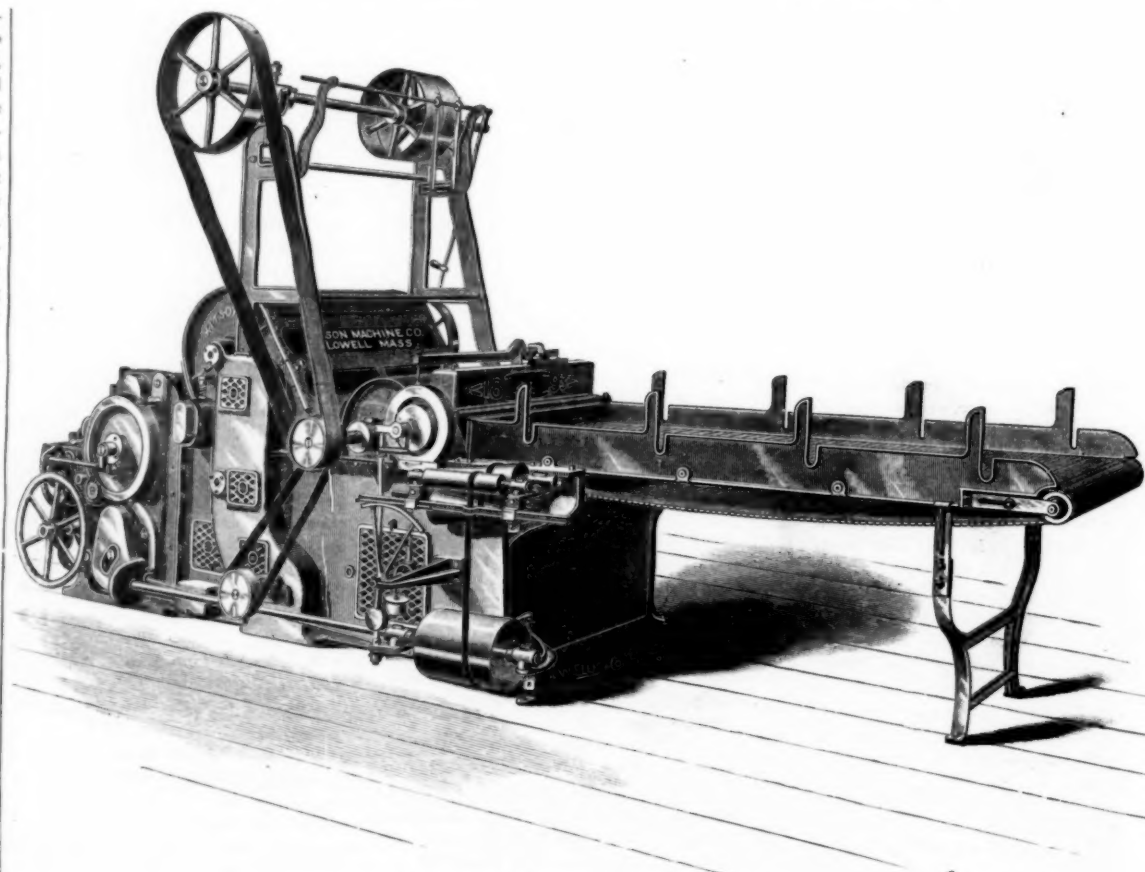


FIG. 2.—SINGLE SECTION FINISHER LAPPER.

above, containing the latest pattern sectional plate evener, apron to double four laps and countershaft attached.

Special mention should be made of the new evener, inasmuch as it differs from other eveners in having the sections or divided plates which work on the uneven sheets of cotton passing under them, con-

tained within the casing (marked 1893 in cut), keeping them out of the natural dirt arising from the cleaning of the stock and thus not impairing their freeness to work effectually at all times.

The third illustration shows the lap head

under the evener plates above referred to, is one of the recent patented improvements brought out by the company. Both the breakers and finishers have heavy compress lap heads with patented flanges on rolls for producing full and straight selvages, better shown in the first illustration.

It is reported from Wilmington, N. C., that while Mr. Ed. H. Colman, of New York, was visiting that city last week, he made the citizens a proposition for the erection of a \$200,000 cotton mill. It is understood that Mr. Colman would locate a mill in Wilmington if the citizens will take \$50,000 worth of stock in it. Mr.

Colman is president of the Gladstone Manufacturing Co., of London, England.

THE new building now being built for the Lane Cotton Mills at New Orleans will be a three-story structure 66x114 feet. Mr. D. Einsidel has the contract for building it, and expects to have it completed by September 1. The building will cost about \$22,000 and the additional machinery about \$50,000, and fifty additional hands will be employed.

THE Texas Mining & Improvement Co., of Marble Falls, Texas, has closed contract with the James Leffel Co. for two 50-inch register-gate water-wheels to develop 600 horse-power. This power is to operate the Marble Falls Cotton Mill now in course of erection.

THE Clover (S. C.) Cotton Manufacturing Co. has resumed operations at its mill, having been shut down for a short time on account of trade dullness. Orders are booked that will keep the plant busy for several months.

GROUND was lately broken at Elkin, N. C., for the large new woolen mills to be built there, and bricklaying has been com-

in other parts of the plant, and these inequalities have been adjusted.

A SMALL difficulty in wages was met with at W. E. Holt's mill at Davidson, N. C., last week. Notice of a reduction of two cents on a cut was given, and at dinner the weavers quit and refused to go to work. On the next day, however, they accepted the reduction and resumed work. Overstock in plaids is said to be cause of the cut.

Work of the Young Men's Business League of Memphis.

All that is needed to add to the industrial growth of our Southern cities is the continued efforts of the people, backed with good judgment. This has been well exemplified by the success which has attended the efforts of the Young Men's Business League of Memphis. Under an excellent organization, backed by the co-operation of every member and with an able secretary, this association has in the past year been the sole means of drawing to Memphis four large factories, which will employ between 500 and 600 hands.

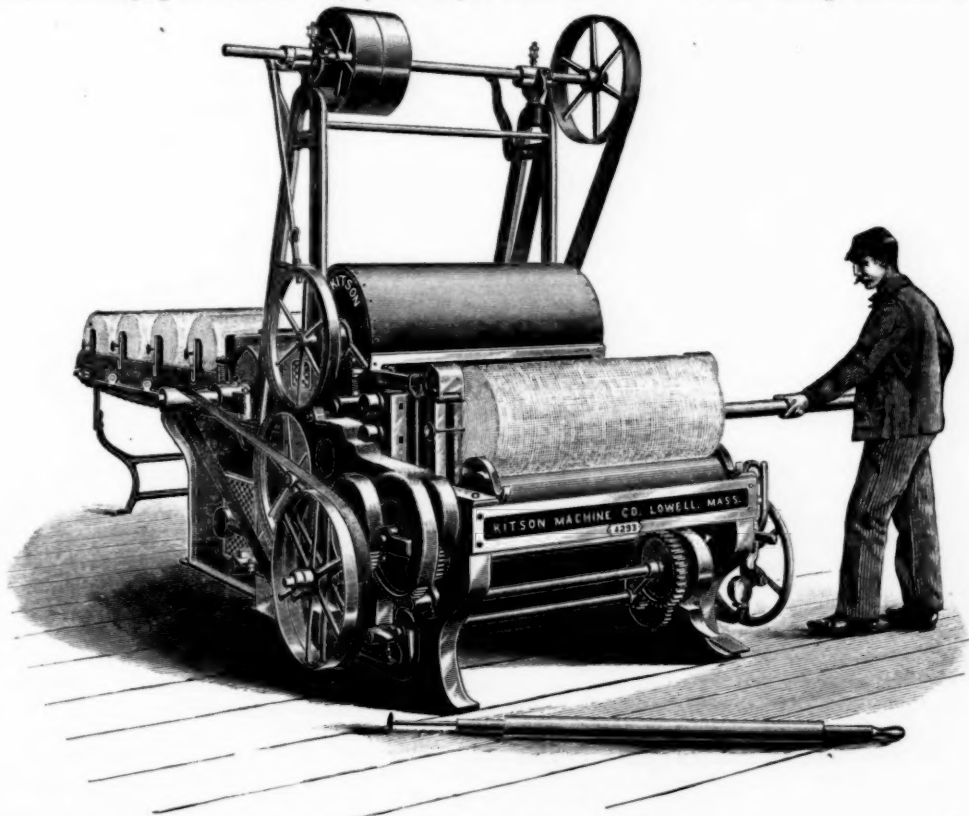


FIG. 3.—LAP HEAD END OF FINISHER.

menced. The Chatham Manufacturing Co. is erecting and will operate the plant.

MESSRS. ALBERT SNAPE & BRO., proprietors of the Ohio Valley Weaving Mills at Moundsville, W. Va., have added to their plant a new finishing-room 50x30 feet and a cloth-room. They will very soon start six more looms in their "Toilet Quilt."

MR. A. B. SANDERS will become superintendent of the Mooresville (N. C.) Cotton Factory when it is completed. He was formerly superintendent of the Pineville Mill.

WORK on the new cotton mill at Jonesville, S. C., is expected to be commenced in the near future, so Mr. J. H. Gault, the company's secretary, writes us. The plant is to manufacture yarn, and will operate 4000 looms.

AN average reduction of 3 per cent. has been made in the expenses of the Swift Manufacturing Co.'s mill at Columbus, Ga. This state was brought about by an adjustment of operatives' wages without any general reduction. In certain parts of the card-room and in the quilt department the employees received better wages than those

The Eaton-Darnell Table Factory, which is one of those secured, was originally the plant of A. L. Eaton, in Ottumwa, Iowa. The factory was burned out, and I. M. Darnell & Sons, of Memphis, from whom it had purchased lumber, called the matter to the attention of the league, resulting in the erection of the factory in the latter city. To this end the league gave valuable assistance, and in appreciation of it Mr. Eaton wrote as follows:

MEMPHIS, TENN., June 5, 1893.

Mr. Thomas G. Boggs, Secretary Young Men's Business League, City:

Dear Sir—As the Eaton-Darnell Table Co.'s factory is completed and about ready to begin operations, I take this opportunity to thank you for your untiring efforts in demonstrating to me the numerous natural and other advantages of Memphis over other points. I think if the same arguments used by you and your league could be scattered broadcast it would be the means of inducing many industries to locate here. It was at your instigation that I came here, and I shall always be grateful to you for the courtesies shown me from time to time. Long live the Young Men's Business League is the desire of yours, very truly,

A. L. EATON.

This factory is a large three-story building, located on the Illinois Central Railroad near the intersection of McLemore

avenue, in South Memphis. Only tables will be manufactured, and in this work about 100 hands will be employed. A large business is anticipated from the beginning, and as time goes on there is no doubt but that under proper management the plant will grow rapidly. Those in charge of the company's affairs are men familiar with every detail of the business and are energetic and practical men. Mr. Eaton has been in the business since his youth and inherited the plant at Ottumwa from his father.

Another factory secured is that of G. I. Neptune, of Vincennes, Ind., who has for a number of years been associated with his father in manufacturing staves, headings and all classes of cooperage work. When in the South looking for a supply of raw material Mr. Neptune met the secretary of the league, and after remaining in Memphis for some time examining the facilities offered for his business, he returned to his home. After due consideration he concluded to erect a plant, and, with the assistance of the league, selected a piece of ground suited for the purpose. Contracts for the buildings have been let, and by

The next plant secured by the league is a corporation chartered under the laws of Tennessee as the Connable Veneer & Lumber Co. In the latter part of March last J. L. Connable, of Springfield, Ohio, sent out a circular letter to a number of cities asking for information as to the facilities presented for his business. After visiting a number of those answering, Mr. Connable went to Memphis and finally decided to locate the plant there, purchasing ten acres of land on the line of the Newport News & Mississippi Railroad, near Randolph pike. The buildings have now been contracted for. The enterprise will bring into immediate use \$50,000. The works will have a capacity of 150 tables daily within the coming year, and will employ 100 men in the veneering mill and about 200 in the table factory. The following letter from this company shows its appreciation of the advantages of Memphis and the efforts of the league:

SPRINGFIELD, OHIO, June 8, 1893.

Mr. Thomas G. Boggs, Secretary, Memphis, Tenn.:

Dear Sir—Our Mr. Joseph Connable will be at your place tomorrow night to stay, and the business will be pushed right along. The writer, with other members of the firm, desire to thank you individually, and also the Young Men's Business League as an organization, for the interest shown and time spent for us in selecting a location. We visited several places in the South where a free site and bonus were offered if we would locate, but we decided to put our plant at Memphis on account of its many advantages which we were enabled to hear of through your splendid organization. We cannot help but think that this league of yours will do a great deal of good for your city, provided that persons who are looking for locations are attended to and as much interest taken as there was with us. The writer and Mr. J. L. Connable will not be down for some months, or until Mr. Joseph M. is ready to start the plant. Again thanking you, we beg to remain, yours truly,

THE CONNABLE COMPANY,

Per R. M. Connable.

The next concern secured by the league was the Memphis Butter Tray and Basket Factory, owned by P. Gronauer, Gustave Gronauer and W. D. Lewis. This concern has been operating in Stuttgart, Ark., and last December wrote the league asking what could be done to aid it should a removal to Memphis be made. After this Mr. Lewis, of the company, visited Memphis, and, with the assistance of the league, secured the co-operation of Messrs. Gronauer, who furnished the additional capital needed. The factory will employ about ninety hands.

The following letter from this company is interesting:

STUTTGART, ARK., June 3, 1893.

Mr. T. G. Boggs, Secretary Young Men's Business League, Memphis, Tenn.:

Dear Sir—It is most gratifying to myself and associates to announce, through the untiring efforts of the Young Men's Business League and its able secretary, we have decided to locate our factory in Memphis, owing to the many advantages you have placed before us. We are also glad to say in making the move we have decided to increase our facilities four times the present capacity. We sincerely trust you will receive the indorsement of every citizen of Memphis in the good cause you are working, and awaken them to the great value your league is rendering Memphis by making it in the manufacturing line second to no city of its size.

Again expressing our gratitude to yourself and the league, we trust that your every effort will be crowned with overwhelming success in the future. Respectfully,

STUTTGART BASKET CO.,

Per W. D. Lewis and P. Gronauer, of the Memphis Butter Tray & Basket Co.

The capital employed in these four factories amounts to about \$300,000, and the annual wages will be this amount or more. This not only adds to the money circulating in the city, but each concern helps in just so much in spreading knowledge of the excellent facilities offered, for manufacturing establishments in that its name and address appears on its products. The league certainly deserves credit for the work it has done, and should have the hearty co-operation of every business man in the city, since each new industry benefits every class of business and adds to the general prosperity.

September 1 the plant will be in operation. The business will represent a capital of about \$150,000 and employ 110 men. Mr. Neptune has written as follows:

VINCENNES, IND., June 6, 1893.

Thomas G. Boggs, Secretary Young Men's Business League, Memphis, Tenn.:

Dear Sir—I expect to be with you Friday or Saturday of this week, but would like to take this opportunity of telling you of my appreciation of the many valuable services the Young Men's Business League rendered me while I was seeking a location in the South. I had by no means fixed upon Memphis when I first saw you, and had been to other places that seemed to be unsurpassed for my line until I got the information from the league, which I was certainly not aware of, and which determined the selection of Memphis as the point at which I shall build my plant. I was a stranger in a strange land when you received me with great courtesy and were untiring in your successful endeavors in making me see that Memphis held out advantages that I could procure at no other place North or South. I am a poor hand to be complimentary, but I would like to say that your organization, in my opinion, will be of incalculable benefit to the city, in which I have shown my faith, that the methods will certainly be effective and that all good citizens should see that the work that had such a fine beginning should be perpetuated. With this expression of my own gratitude, you may count me as a warm friend of the league.

Yours respectfully, G. I. NEPTUNE.

PHOSPHATES.

The Charleston Phosphate Trade.

CHARLESTON, S. C., July 3.

The phosphate trade of this port is showing up better, and the market has taken on a more cheerful tone during the past month. The latest advices from the phosphate beds of the State are more encouraging, and under the latest European reports the product is held firmer. It is said that the royalty for the past eight months has been \$175,000, as against \$157,000 for the corresponding period of last year. It is thought that the royalty for this year will amount to \$260,000, which will be \$23,000 more than ever before known in the history of the industry in the State. From all mining points throughout the State reports are encouraging. Miners find ready sale for all the rock they can get out, and are doing a good business. The shipments of phosphate the past week were 900 tons per schooner George Two-boy for Boston, 900 tons per schooner Vanleer Black for Baltimore, 800 tons per schooner S. B. Marts for Cartaret, N. J., and 100 tons ground phosphate per steamer to New York. The market closes steady with values as follows: Crude rock \$3.75 to \$4.25 f. o. b., hot-air dried \$4.75 to \$5.00 f. o. b., and ground rock \$7.50 to \$7.75 f. o. b. Freight on phosphates are firm with rates unchanged.

The comparative exports of crude phosphate rock and ground from the port of Charleston from September 1, 1892, to June 30, 1893, and for the same time in 1891-92, are as follows:

Destination.	1892-93.		1891-92.	
	Crude.	Ground	Crude.	Ground
Baltimore.....	34,264	.....	32,915	.....
Philadelphia....	14,338	.....	14,269	.....
Boston.....	.....	.....	859	.....
Elizabethport....	.....	.....	.....	.....
Wilmington, Del..	5,633	.....	600	747
Barren Is., N. Y..	.....	.....	1,673	.....
New York.....	8,653	2,241	11,513	2,234
Mantua creek....	1,835	.....	2,779	.....
Weymouth.....	12,155	.....	17,562	.....
Richmond.....	4,999	.....	8,364	.....
Seaford, Del.....	1,200	.....	1,200	.....
Newton ck., N. J..	1,078	.....	1,078	.....
Wilmington, N. C.	665	.....	450	.....
Welsh Point.....	.....	.....	.....	.....
Orient, L. I.....	.....	.....	1,890	.....
Other ports.....	7,665	.....	3,390	300
Total exports....	91,885	2,241	98,933	3,281
By railroads.....	.....	.....	35,500	1,613
Foreign ports....	175	.....	442	.....
Grand totals....	92,060	2,241	134,975	4,894

FERTILIZER INGREDIENTS.

The market for fertilizer ingredients is quiet and very steady. There is a better demand from manufacturers, who are already preparing for the coming season's trade. There is a light offering of fish, and tankage and blood are in light supply, with prices very steady. Brimstone is quoted at \$20.00 to arrive for best unmixed seconds, kainit \$12.00 to \$12.50 and nitrate of soda \$2.20 to \$2.25 per 100 pounds.

Phosphate Markets.

OFFICE MANUFACTURERS' RECORD, BALTIMORE, July 6.

There is no material change to note in the general phosphate market, and the volume of business is light, with no urgent demand. Manufacturers are buying small lots, but there is nothing to indicate any activity at the moment. Advices from the European markets are more encouraging, and there is now a fair demand from that quarter. There are no charters of vessels reported, and the freight market is quiet, with a moderate offering of ocean tonnage and rates unchanged. The arrivals during the week were schooners Vanleer Black, with 910 tons phosphate rock from Charleston, S. C., and the Blanch Hopkins, from Port Royal, with 876 tons. The list of values is not materially changed, and the market closed firm, as follows: Ashley river rock \$4.85 and Charleston \$5.00, and for future delivery \$4.25 to \$4.50 for 50 to 55 per cent. product; Florida river pebble

60 per cent. product is quoted \$4.25 to 4.50 f. o. b., and land pebble 60 to 70 per cent. product \$5.00 to \$5.50 f. o. b. Florida hard rock is firm at \$8.50 to \$8.75 f. o. b. Fernandina.

FERTILIZER INGREDIENTS.

There is no change of importance to note in the fertilizer market. There is a more quiet tone to the foreign markets for phosphate rock, and more disposition is shown by sellers in Florida to consider the wants of home markets. Ammoniates remain unchanged, except nitrate of soda, which shows an advancing tendency, with a decided recovery from last week's depression. Last sales of blood reported were at 1.90 per unit f. o. b. Chicago; fish at \$25.00 per ton Baltimore; tankage, 7 per cent. ammonia and 25 per cent. bone, at \$23.00 to \$24.00, and 9 per cent. ammonia and 20 per cent. bone at \$24.50 to \$25.00 per ton Baltimore; kainit is quoted \$11.50 to \$12.00 per ton of 2000 pounds in bags, and muriate of potash, \$1.85 per 100 pounds.

Phosphate Shipments from Port Tampa.

PORT TAMPA, FLA., July 4.

The shipments of phosphate for the week ending July 6 are as follows: Bark Oliver Thurlow cleared July 2 for Cartaret, N. J., with 930 tons pebble from the Massachusetts Phosphate Co.; the British steamship Broomhaugh cleared on July 4 with 2200 tons of pebble from the Bone Valley Phosphate Co. for Stettin, Germany, via Norfolk. The following vessels have arrived and will load phosphate for Continental ports: Steamship Annandale from Bermuda on July 3; Maroon from Jamaica, and the New York City from Philadelphia.

Phosphate and Fertilizer Notes.

H. F. DUTTON & Co. will soon run a spur from their phosphate mines to the South Florida Railroad, a distance of three miles. They will erect warehouses and other buildings at the junction of the two roads.

THE phosphate shipments from Fernandina, Fla., have fallen far below the estimate for the month of June, amounting to only 2946 tons. There are nearly 8000 tons in port at present awaiting shipment.

THE mineral land company of Davis & Eastman vs. the Capital Phosphate Co., which was appealed from the United States Circuit Court to the United States Court of Appeals, was argued in New Orleans on the 12th and 13th ult. by W. S. Bullock, of Ocala, for the appellants, and by Robert M. Smith for the Capital Phosphate Co., the respondents. It was later decided in favor of the respondents.

INSPECTOR JONES, of the phosphate beds of South Carolina, says that the royalty for the past eight months has been \$175,000, as against \$157,000 for the corresponding period last year. Mr. Jones expects the royalty for this year to amount to \$260,000, which will be \$23,000 more than ever before known in the history of the industry in the State. Miners are generally doing well.

MR. W. K. JACKSON is erecting a large steel log-washer at Inverness, Fla., with a capacity of seventy-five tons per day, for phosphate mines in the vicinity. He is also erecting large dry-kilns, and will build a side-track to washer from the main line of the Ocala, Silver Springs & Gulf Railroad.

THE Land Pebble Phosphate Co., located at Pebble, ten miles south of Lakeland, Fla., is entirely remodeling its plant, and when completed will be among the finest in the State.

A SCHEME is said to be on foot among certain capitalists of Bartow, Fla., to put in a large central electric plant to furnish power to the phosphate plants within easy reach, and also to light the town of Bartow. No definite action has yet been taken in the matter.

COTTONSEED OIL.

This department is open for the full and free discussion of trade topics and practical questions, and contributions are invited from men who are identified with this industry. Items of news are always acceptable.

Cottonseed Oil in Holland.

ROTTERDAM, June 27.

Editor Manufacturers' Record:

There is very little news to report of the market of this article here. Business remains very slow; the owners of oil are not inclined to sell their goods at the low prices offered by the butterine manufacturers, and the buyers are not inclined to pay the high quotations of the owners. Only 36fl. per 100 kilos ex warehouse remains obtainable for large quantities strictly choice cottonseed oil, but the owners are not willing to listen to this figure. Some of them are offering now at 38fl., which figure was not obtainable. It is probable that if the owners insist on the high price they shall be obliged to sell their goods later on at lower prices than are now obtainable. The last crop has been good; the demand has been small owing to the high prices, and therefore it is clear that stocks are important. The prices are still far from low. Why don't the owners take advantage of the obtainable prices? The reports from America inform that the new crop of cottonseed shall be good; that the quality of the new oil shall be satisfactory, and much better than last year, but that the oil shall come on the market only some weeks later than last year. Prices of lard are getting somewhat easier, and therefore it is not probable that the oil of the new crop shall be very high in price. I think it advisable that the owners sell their goods, in short before the oil of the new crop shall be offered from the side of America.

G. W. SANCHES.

The Cottonseed-Oil Market.

NEW YORK, July 5.

Editor Manufacturers' Record:

THE conditions of the cottonseed-oil market have not varied much from the date of our last report. The intervening holidays have tended to quiet the disposition to buy, while there are sellers on the basis of the advance made last week. The stocks have been working, in some degree, into stronger hands, and a number of small lots upon which there have been orders to realize have been absorbed by the parties who have been steadily buying for some time, as the prices looked advantageous to them.

THE Mediterranean demand will probably prove of a spasmodic character. It came in suddenly last week, took a moderate quantity and almost immediately became quiet. The supplies in that direction are light, and steady, moderate wants may be expected from time to time. That trade from that source, however light, would be an encouraging factor was shown in the quick turning about of prices last week to a slight advance. However, at present there is very little inquiry for oil, and while prices are held up to the recent quoted basis, there is much more trouble in getting bids.

WE observe some improvement in the demand for compound lard on export wants, but there is no prospect of this trading in the warm weather assuming sufficient importance to force material buying interest from the lard refiners for oil. There is absence of demand from Holland, and all other export interests are indifferent.

THE local soap trade is practically out of the market, as it finds tallow relatively lower in price for its use. There has been, however, more or less inquiry from various home trade sources for off grades of yellow, and they are closer than usual to the price

of the prime grade, the best of these qualities standing only one to two cents below the rate for the better quality. The distributions of supplies in small lots to the various local consuming interests have been fairly satisfactory, and some portion of the business that has been done in larger lots has been with the distributors who have had their moderate holdings much reduced.

THERE is general willingness to meet promptly any demand that turns up at current prices, and it would require more than the marketing of small lots to put further vigor into the situation. Up to forty-three cents has been paid for prime yellow, but at the close, with that the holding price, it is impossible to get offers from buyers. For a nice lot of off-grade yellow forty-one cents was bid. Prime crude could not be sold at over thirty-six cents, while it is held at thirty-seven and thirty-eight cents and has not sympathized at all with the recent strength on yellow. There is nothing that indicates marked demand for oil from local sources. The hog products are easing off in price under the dull export movements and the irregularities in general trade affairs through the money situation, and we do not look for supporting features for oil unless there should come in further export demand, which is possible from the Mediterranean and Holland.

HOPKINS, DWIGHT & Co.

Velasco's New Cotton-Oil Mill.

THE work on the cottonseed-oil mill at Velasco, Texas, is progressing rapidly. The general manager, Mr. A. A. Vardell, has now over seventy-five men engaged on the oil-mill building. The walls of the main building are nearly up, and the engine, boiler-room and seed shed will be rapidly completed. The capacity of the mill will be about 150 tons per day. An important feature will be the immediate erection of a cotton gin on the grounds adjoining the oil mill. Work on the wharves is going ahead, and they will soon be ready for use, there being twenty feet of water, which will afford berths for good-sized vessels.

Cottonseed-Oil Notes.

THE cottonseed-oil mill at Bryan, Texas, is nearing completion and the heavy machinery is about all in position. The company has begun to buy cottonseed, which they are storing, and will be in good working order by the opening of the cotton crop.

THE Cotton Oil & Manufacturing Co., of Terrell, Texas, filed an amendment to its charter on the 1st inst., providing for an increase of its stock from \$50,000 to \$60,000.

THE cottonseed-oil mills at Raleigh, N. C., have just completed the shipment of 1000 tons of cottonseed meal to foreign ports via Norfolk and Newport News.

THE St. Mathew's Oil Mill at St. Mathew's, S. C., has declared a most remarkable dividend on the capital stock of 52½ per cent. The old officers were re-elected as follows: F. J. Buyck, president; J. E. Wannamaker, vice-president, and P. Rich, secretary and treasurer.

COTTONSEED products are generally very firm in price, and the market in New Orleans is steady and not materially changed. The near approach of the cotton season will create an easier market, and already cottonseed is quoted lower, being now \$12.00 per ton of 2000 pounds delivered; cottonseed meal \$22.00 to \$22.50 per short ton; for export per long ton f. o. b. \$24.00 to \$24.50 for current month; oil cake for export \$24.00 to \$24.50 per long ton f. o. b. Crude cottonseed oil is quoted at forty-five to forty-six cents for strictly prime in barrels, and thirty-eight to forty-one cents for loose. Refined is quoted at fifty-two cents per gallon for prime at wholesale or for shipment. Cottonseed hulls are quoted at thirty to thirty-five cents per 100 pounds.

RAILROAD NEWS.

[A complete record of all new railroad building in the South will be found in the Construction Department, on page 425.]

Baltimore & Ohio's Voting Trust.

What might be termed a pool in Baltimore & Ohio stock was formed three years ago, by which the shares held by the Garrett family and other investors who controlled a majority of the stock were voted by one person. The present management of the system, of which Mr. Charles F. Mayer is the head, has been supported by the combination which was dissolved July 1. The object of the pool was to prevent any syndicate representing a rival or other railway corporation from securing control of the road, but since its formation the Baltimore & Ohio capital has been increased by \$10,000,000, of which considerable is held in Europe and outside of the pool. The latter has not had a majority of the stock since the increase in capital. With the expiration of this voting trust there is more opportunity for the speculative market to deal in Baltimore & Ohio and more opportunity for a clique to run it down with the view of buying large blocks and eventually obtaining a controlling interest. The report that the Vanderbilts intended to be represented in the South by the Baltimore & Ohio and Richmond Terminal may be verified or disproved by the future movement of the Baltimore & Ohio stock in Wall street. Thus far there is no indication of any attempt to obtain control, while the fact that dividend payments have been resumed under President Mayer's regime will deter holders of large blocks from selling unless for very good reasons. This will apply to English investors who regard Louisville & Nashville and Baltimore & Ohio as among their safest and most profitable holdings.

Richmond Terminal Changes.

The concessions, which it is announced Drexel, Morgan & Co. will make to the Baltimore underlying bondholders committee on the Northwestern North Carolina, Oxford & Clarksville, Clarksville & North Carolina and Danville & Western securities, of which the committee control over 50 per cent., are the exchange of the same amount of new bonds and 75 per cent. in preferred stock under the reorganization scheme. The original concessions were 35 per cent. in new 5s and 65 per cent. preferred stock. The committee has been actively at work in the interest of the securities it represented ever since the reorganization plan was made public, and gratifying results of its labors are shown by the important changes made by the reorganizers of the Richmond Terminal through its influence. Mr. J. Willcox Brown, of Brown & Lowndes, was its chairman, and Mr. John M. Nelson, of Hambleton & Co., its secretary.

Georgia Central Decisions.

Justice Jackson's decisions in the Georgia Central litigation at Savannah may be summed up as follows:

Holding the Central for the tripartite mortgage bonds amounting to \$10,500,000.

Declaring the system financially wrecked and upholding Receiver Comer's course.

Making a decree of sale of the Central properties.

Dismissing the Romena Clarke suit.

Reinstating the 42,000 shares held by Richmond Terminal interests.

This ends the trial which has been one of the greatest legal contests ever held in this country. The ability of the counsel on both sides and the remarkable insight of the court into the intricate proceedings of the cases, as well as Justice Jackson's wonderful executive power, have attracted attention to the case from far and wide.

Receiver Comer, E. Van P. Howell and

Charles H. Phinizy have had a conference with Messrs. Hollins & Co. regarding the Central's floating debt, which amounts to about \$5,300,000. The question of reorganization has also been considered, but as yet no decision has been announced. The fact that the Richmond Terminal interests may vote on the 42,000 shares they hold may have a powerful influence in shaping any new plan of reorganization with that which will go into effect on the Terminal roads. Mr. Hollins has given the press the statement published in the MANUFACTURERS' RECORD, June 30, that reorganization plan has been abandoned.

The North and South Line.

Nebraska, Kansas, North Dakota, Texas, Iowa, Minnesota and Oklahoma were represented at the convention at Lincoln, Neb., held in the interest of a railway line from Dakota to the Gulf. The Populists formed the majority of the sixty-seven delegates, and adopted resolutions favoring the construction of the line and its control by the States through which it might pass. Electricity was favored for a motive power, and the cost of construction was estimated at \$30,600,000. The project has been left to a provisional committee to consider and report at a meeting to be called later in the year. Texas was represented by a large delegation, which warmly advocated some of the ports in that State as the terminus for the line.

Gratifies English Investors.

A recent issue of the London *Financial Times* thus speaks of the Norfolk & Western: "An important piece of news in regard to the Norfolk & Western transpired yesterday, and put the price of the preferred shares over twenty-six at one time. In cables from President Kimball it was announced to the agents here that the Illinois Steel Co., a large concern in Chicago, had completed its contracts for coke, and requested the Norfolk & Western to arrange for shipments at once. As the contract is for one trainload daily, it means a very important increase to the traffic on the recently opened Ohio extension. At present three trains are being run each way daily, and the addition to gross earnings from a fourth is estimated at between \$300,000 and \$400,000 per annum on the extension. This is very gratifying confirmation of President Kimball's contention that there would be a good demand for the Pocahontas coal from Chicago and the North and Northwest. Even without such windfalls as the new coke traffic the Norfolk & Western is now doing well. The monthly statements up to the end of April now show a small net increase for the year, and it is expected that between \$70,000 and \$80,000 will be retained out of the gross increase of \$134,000 for May, while the first week of June shows a gross increase of \$34,000. Altogether, the Norfolk & Western system seems to have turned the corner."

Taxes and Earnings.

After several long hearings and any amount of protesting from the several companies, the South Carolina board of equalization has completed the assessment of several of the railway lines. Out of twenty-one roads seven have been assessed at a lower figure than in 1892. These are the Sea Island, \$1000 per mile less; Carolina Midland, \$5000 per mile, \$1500 reduction; South Carolina Central, \$8000, \$2000 less; Cheraw & Salisbury, \$3500, \$1500 reduction; Manchester & Augusta, \$4000, \$1000 reduction; Wilson & Summerton, \$1300, \$498 reduction, and Wilmington, Conway & Chadbourne, \$4000, \$1000 reduction. The roads in the Richmond & Danville system have not been passed upon yet.

In this connection the State railroad commission's report is interesting. It shows that the earnings of all the roads in

the State for ten months ending April 30 were \$99,308.65 less than for the same period of 1892. Of the lines which show a decrease, the Wilmington, Columbia & Augusta is by far the most prominent, with \$15,074.51 decrease for March alone. The reductions made by the State board of equalization do not specially apply to the lines which fell off in receipts, and two roads which show a decrease had their taxable values increased. However, the railways may appeal from the board of equalization to the courts, as the MANUFACTURERS' RECORD has already intimated, and the present assessments may be declared too high when compared with the scale of earnings.

May Railway Earnings.

The following showing of May earnings is made by a group of prominent Southern roads:

Chesapeake & Ohio, net, 1893, \$201,733; 1892, \$157,175.
Louisville & Nashville, 1893, \$511,059; 1892, \$560,011.
Norfolk & Southern, 1893, \$17,439; 1892, \$16,153.
Norfolk & Western, 1893, \$277,727; 1892, \$206,024.
Northern Central, 1893, \$217,677; 1892, \$120,174.
Galveston, Houston & San Antonio, 1893, \$58,192; 1892, \$36,576.
Texas & New Orleans, 1893, \$73,076; 1892, \$50,089.
Western Maryland, 1893, \$29,949; 1892, \$27,271.

Out of this group the Chesapeake & Ohio, Norfolk & Western, Northern Central and the two Southwestern lines show remarkably large increases, the Norfolk & Western amounting to over \$70,000 and the Northern Central to nearly \$100,000. The Louisville & Nashville shows a heavy decrease, which is partly accounted for by special expenses incurred during the month.

Southern Railway Changes.

The following are recent changes among Southern railway officials:

B. H. Hopkins appointed Southwestern passenger agent of the Savannah, Americus & Montgomery.

J. M. Booth, auditor of the Florida Midland, will also have charge of the general freight and passenger departments of the road.

William Moncure appointed superintendent of the Carolina Central and Raleigh & Gaston.

Superintendent Dickinson, of the Cotton Belt system, resigned.

John W. Green, general manager of the Georgia Railroad, resigned.

W. J. Craig appointed general freight and passenger agent of the Port Royal & Western Carolina.

Robert Wright appointed general agent of the Port Royal & Augusta.

A. D. Drew appointed assistant general freight agent of the Missouri, Kansas & Texas.

C. H. Henion appointed traveling passenger agent of the Southern Pacific.

Charles Potter appointed roadmaster of the Iron Mountain system.

A. W. Gibbs, master mechanic of the Richmond & Danville, resigned.

A. J. Welch appointed general passenger agent of the Paducah, Tennessee & Alabama and Tennessee Midland. Geo. McFadden appointed general freight agent of the same system.

Railroad Notes.

MRS. CHARLES FIELD has been appointed car accountant of the Texas Central. She is said to be the first woman to fill the position of car accountant.

THE report of the Western Maryland Railway for May shows an increase in net

earnings of \$2677.90 over May, 1892, notwithstanding a large outlay in building the branch to York, Pa. A comparison for the eight months ending May 31 shows a net increase of \$52,740.56 over the same period of 1891-92.

THE court has decided that the Memphis & Little Rock cannot enter Little Rock, Ark., over the Iron Mountain's terminals. This decision will oblige the former to either construct a bridge across the Arkansas river and secure right of way into Little Rock at a great expense, or to abandon Little Rock as a terminus.

THE Darien (Ga.) Short Line, a road seventeen miles long, has been sold at auction to the bondholders, a New York syndicate. The new extension of the Florida Central & Peninsular may be connected with the Short Line, as the latter is only six miles from the former's terminus.

THE State railroad commissioners of North Carolina have estimated the taxation valuation of the lines in the State at about \$25,000,000. The Raleigh & Gaston is included in the list for the first time. It is assessed at \$125,000.

The Stuttgart & Arkansas River Railroad was, upon the application of creditors, put into the hands of A. V. Stafford, of Pine Bluff, as receiver. The road is thirty miles in length and valued at \$500,000.

Judge Newman, on application of H. H. Epping, trustee, has appointed H. M. Comer receiver for the Mobile & Girard in the State of Georgia.

At the annual meeting of the Lynchburg & Durham, a part of the Norfolk & Western system, held at Lynchburg, Va., the following directors were elected: W. C. Houston, Jr., John B. Lumig, Prof. E. J. Houston, Philadelphia; Joseph H. Sands, Roanoke, Va.; R. H. T. Adams, G. H. Nowlin, P. J. Otey, A. S. White, Lynchburg; R. W. Lawson, South Boston, Halifax county, Va.; J. S. Carr, Geo. W. Watts, L. A. Carr, B. L. Duke, Durham, N. C.

THE stockholders of the Chester & Lehigh, a South Carolina branch of the Richmond Terminal system, have decided to refuse the terms offered by the reorganization plan, and will employ counsel to resist its enforcement.

THE Richmond & Danville and the Norfolk & Western have been fined \$1500 each for not maintaining rates established by the Southern Railway and Steamship Association.

JUDGE RICKS, of the United States Court, has fixed September 18 as a date for the hearing of the suit against P. M. Arthur, grand chief engineer of the Brotherhood of Locomotive Engineers, for \$200,000 damages for alleged encouragement of the recent engineers' strike on the Toledo, Ann Arbor & North Michigan road. The case will be heard at Toledo, Ohio, before a special jury.

THE annual "harvest" excursions West, which have been in vogue throughout the South for the past several years, will be run this year as usual. The excursions will be made principally to Texas and Arkansas.

W. T. MARQUIS has contracted with A. E. Willard, superintendent of the Bradley Phosphate Co., to do a large amount of mining for that company, and also to do their railroad building about to be projected.

It is rumored that the Bradley Fertilizer Co. intends at an early day to commence work on its phosphate lands near Bartow, Fla., and will erect one of the largest and finest plants in the country.

A COTTONSEED-OIL mill company lately organized at Crocker, Texas, has been chartered under the name of the Houston County Oil Mill & Manufacturing Co.

Manufacturers' Record.

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BALTIMORE, JULY 7, 1893.

Notice to Advertisers.

The last forms containing advertisements are closed on Tuesday afternoon. New advertisements or changes should be received not later than Tuesday noon to ensure attention in the issue bearing date of the following Friday. Reading matter should be in our office on Wednesday, although late news can be received early Thursday morning.

SINCE South Carolina has taken the liquor business into its own hands and driven from the State those formerly engaged in it, Augusta, Ga., has turned an eye towards the money which will thus be open for investment, and recently held a meeting, at which resolutions were passed showing the excellent opportunities presented by the city for investment and inviting the South Carolinians to investigate their city before deciding to locate elsewhere. It is not to be expected that the money driven out of the liquor and grocery business in South Carolina will all go back to the same business in other States, and as Augusta presents most excellent opportunities for profitable investment, it is more than likely that its promptness to seize upon the occasion will result in good. On many other occasions Augusta has shown its enterprise, but never more to the point nor with a greater degree of promptness than now. If all our Southern cities would show the same degree of public spirit they would be benefited.

It seems a pity that the great State of Texas, with all its wealth, should not be willing to carry out its much-boasted-of plans of making the Texas exhibit at the World's Fair the Mecca for every visitor. Before the building was commenced everyone was enthusiastic about it, and glowing promises were made as to its future. After a while the building was half completed and work stopped because of insufficient funds. The various committees worked hard to have the plan carried out, and only at the last moment succeeded. The building, now completed, is as excellent and striking a piece of work as might be desired, but an examination of it would lead a visitor to suspect that there was some truth in the story that Texas is all "blow," because the building is the extent of Texas's display—within it there is little more than wind. Now this is not right, nor should it be allowed. Here is one of the best chances

there ever will be of setting before people from all over the world the many advantages of the State. There are the cities of Houston, of Dallas, Galveston, Austin, Belasco, San Antonio, Fort Worth and others, which now have a chance to advertise themselves in a manner never done before, and at little expense. Little money is needed—only one thousand dollars a month for the remaining four and a-half months of the fair. The amount is so small that it hardly justifies asking Texan's to show their spirit. Just show common sense and don't lose a chance which can never come again, and which, if lost now, will be regretted for many years to come.

The Financial Situation.

Waiting expresses the financial situation in a word. Everyone who can possibly delay business transactions until after the special session of Congress called for August 7 will do so, and the dullness which has been reported from all parts of the country during the week is liable to continue until that date.

No special local trouble has been reported from any part of the South during the week. No unusually large bank or mercantile failure has occurred. Banks are still extremely cautious in accommodating even regular customers. Merchants are buying only what is absolutely necessary. Indications point to large increases in deposits of the banks which are considered the soundest; in other words, people are hoarding their money until the turning point in the situation is reached. No more gold has been imported, but none has been exported. It is stated that the Bank of England is doing everything possible to retain its gold. Experts who have studied the action of India say that the suspension of free silver coinage will place that country on a level with the United States as an exporting country. Prior to this time it has enjoyed advantages the United States could not have.

The large interest and dividend disbursements elsewhere detailed give an idea of the amount of money realized from Southern investments in the half year. Foreign investors continue to hold Southern railway securities. England has plenty of money to put into American investments as soon as confidence is restored. Fear of labor trouble is removed by the wage agreement between iron and steel-workers and employers for another year. Crop reports from 200 localities during the week, which included many sections of the South, give a favorable outlook for most of the cereals. The farmers are hopeful of good returns and believe the depression in wheat due to speculative influence. The railroad outlook presents many encouraging features. Earnings are large and bid fair to increase largely with the summer passenger traffic and movement to Chicago. There is every reason to believe that the Georgia Central will soon be undergoing a process of reorganization with the Richmond Terminal.

July Dividends in the South.

The most striking feature of our news columns this week is the extended list of July dividends and interest payments in the South. The disbursements on

these accounts at this season of the year are always heavy, and the release of such a large amount of cash at the present time cannot fail to be beneficial to every interest in the South. We have taken great pains to collect through our numerous correspondents information concerning the dividend and interest payments that have been or will be made this month by Southern corporations, and a partial list is printed elsewhere in this issue. This list does not by any means represent the aggregate of such payments, but it will serve to indicate the earning power of Southern stocks during even such dull times as are now upon us.

From the figures we have gathered, and the data furnished us by well-informed correspondents, we estimate that the amount of July payments on account of dividends and interest will not fall short of \$25,000,000, and will probably largely exceed that amount. When it is considered that this vast sum will be paid out in cash, and that nearly all of it will go into circulation in the South at a season of the year when cash is most needed, the helpful influence of these payments will at once be apparent. The month of July is a most welcome period everywhere because of the great amount of cash then released, but to the South, and at this immediate time, the occasion is one of vast importance. The stringency of money and the restriction of credit, which have played such mischief with business in the West, have affected the South in lesser degree because of the cautious manner in which business in that section has been conducted for more than a year past. Instead of enlarging the scope of their operations and using their credit to the fullest extent, Southern business men have been moving in a cautious manner, and reducing all transactions as near to a cash basis as possible. It is to this cause that the stability of the South during the present disturbed conditions is chiefly due.

The dividend list which we present shows that Southern banks are doing a profitable business and giving good returns to their stockholders. Out of 117 banks only eight are paying less than 6 per cent. per annum. Thirty-six are paying 6 per cent. per annum, nine are paying 7 per cent., thirty-two are paying 8 per cent., eighteen pay 10 per cent., six pay 12 per cent., two pay 16 per cent., one pays 18 per cent., and one is paying at the rate of 40 per cent. per annum. These figures, while embracing only a portion of the Southern banks, represent conditions that prevail throughout the South.

Failures During Six Months.

A study of the statistics of business failures during the half year, as presented by *Bradstreet's*, reveals some interesting points about business conditions during the past six months. The number of failures, the estimated assets and the total liabilities have been greater than during any similar period in the last fifteen years, which means the greatest in the history of the United States. The failures since January 1 number 6,239, or 133 more than in 1885, the greatest previous record. Compared with the first half of last year the past six months show an increase of 888 in

the number of failures. While the total liabilities since January 1 are \$170,860,222, as compared with \$56,535,521 during the same period of last year, the estimated assets increased in the same time from \$28,935,106 to \$105,371,813. It is strikingly shown by these figures that the chief cause of failures has been lack of ready money rather than insufficient assets, for the assets are figured at 61 per cent. of the liabilities during the past six months, as compared with 51 per cent. in the same time last year. It is worthy of note that the percentage of assets to liabilities in the failures of the past six months has been the highest on record as an average for the entire country.

Looking at *Bradstreet's* figures in detail we find that the largest increase in the number of failures appears in the West, where 1633 are recorded for the half year, as compared with 1037 in the corresponding months of last year. The liabilities increased in the same time from \$12,415,040 to \$40,765,888, and the assets from \$6,847,226 to \$30,564,991. The Northwest shows the largest proportionate increase in liabilities—from \$6,355,793 to \$29,154,069. About two-thirds of this increase, or \$14,300,000, is contributed by Iowa, where havoc has been wrought by booms and speculation. One failure alone accounts for \$6,000,000 of this indebtedness, another for nearly \$2,000,000, one for \$2,500,000, and another for \$1,000,000, almost all of them in Sioux City.

The South and New England, popularly regarded as the poorest and the richest sections of the country, stand side by side in the record of failures, a remarkable demonstration of the strength and stability of the South. In New England the number of failures increased from 872 to 919, or 5.7 per cent.; the estimated assets increased from \$3,313,814 to \$6,689,403, or just about 100 per cent., and the total liabilities increased from \$8,944,637 to \$17,346,440, or 94 per cent. In the South the increase in number of failures was from 1043 to 1060, or 1.6 per cent.; assets increased from \$5,849,462 to \$11,428,867, or about 95 per cent., while liabilities increased from \$9,263,201 to \$18,297,454, or 96 per cent. The average liabilities of the failed firms in the South this year was \$17,261, and in New England the average was \$18,875. The average assets in the South amounted to \$10,781, and in New England the average was only \$7,279. The most striking feature of this comparison between New England and the South is the relation between assets and liabilities in the two sections. In the South the estimated assets amounted to 62.5 per cent. of the liabilities, or 1.5 per cent. higher than the average for the entire country. In New England the ratio was only 38 per cent., or 23 per cent. below the average for the country as a whole.

Viewing these statistics from any standpoint, the showing for the South is strikingly favorable, demonstrating clearly the truth of what has been repeatedly asserted in these columns, namely, that the South is standing the strain of tight money and lost confidence better than any other section of the country, a fact that becomes more remarkable when viewed in the light of the adverse business conditions that have long hindered the development and progress of the South.

CORRESPONDENCE

What Rocky Mount Has Done.

ROCKY MOUNT, N. C., June 19.

Editor Manufacturers' Record:

Since my last visit Rocky Mount has become the railroad centre of eastern North Carolina. Not only has she the main line of the Atlantic Coast Line from Washington to Charleston, Savannah and Jacksonville, and the Atlantic Coast Line from Rocky Mount to Wilmington, N. C., the Albemarle & Raleigh system connecting her with Plymouth, N. C., on the Pamlico sound; Scotland Neck, N. C., and Spring Hope (soon to be extended to Raleigh), and the Norfolk & Carolina system connecting the town with Norfolk by a run of three and a-half hours, and the Seaboard & Roanoke connecting with Portsmouth, Va., but the Atlantic Coast Line has adopted it as the main point on this system. It has purchased 125 acres of land, graded it and built the finest freight yard in the country. Repair and car-building shops, the most extensive in the South, are being erected. When completed the plant will reach an investment of over \$1,000,000 and will give employment to 800 hands. These shops are located in the southern part of the town. A large office building is occupied by officers of the company. Forge shops, turntables and a coal chute have been already completed.

If one will take a map of North Carolina and examine the territory of the eastern part of the State, he will see how important is the situation of Rocky Mount, connected as it is with all parts of the United States by the great railroad systems above enumerated, and the centre of a fertile and rapidly developing country.

The latest development in the enterprises of this town is the manufacture of tobacco. For a long time western North Carolina held undisputed sway in the culture and manufacture of this staple, the soil of the eastern part of the State not being considered suitable for its production. The cotton industry absorbed the entire interest of the farmers. They scarcely put enough acreage in corn and other grain to make their foodstuffs. Every possible piece of ground was planted in cotton.

A few years ago, however, it was discovered that the brightest, largest and, in many respects, best tobacco grown was grown in eastern Carolina, not on the low lands, but the high and dry lands of the section of which Rocky Mount is the centre. Thus the people of this whole territory have rapidly become great tobacco growers. Rocky Mount, being the geographical centre of this territory, has naturally become the manufacturing centre. Consequently we find the following statistics for the current year: Up to September 5 5,280,000 pounds, it is estimated, will have been sold. In the year 1889-90 425,000 pounds were marketed; in 1890-91, 2,240,000 pounds; in 1891-92, 4,160,000 pounds. The money value of this year's crop will be about \$450,000. Already there are two smoking tobacco factories; a large plug factory is being built; three sales warehouses and six stemmeries are now running.

Next season's crop bids fair to be very fine. More leaf for the fine trade will be exported from here than from any other Southern market. As to the acreage, there is one farmer not far from Rocky Mount who has never netted less than \$150 per acre. He plants a very large crop, and is considered to be perhaps somewhat above the average farmer. The farmers of this section have fully realized that there is far more money in tobacco than in cotton, hence the rapid development of this section as a tobacco-growing and tobacco-manu-

facturing one. While the culture of cotton costs almost and generally quite as much as can possibly be realized from its sale, this is not true of tobacco, and the farmers have found it out.

The readers of the MANUFACTURERS' RECORD have heard of the Rocky Mount Cotton Mills, but may not have heard of its latest improvement. New buildings have been added recently until the capacity of the mills is 32,000 spindles. The plant now consists of twelve large brick buildings, with the tenement-houses incorporated as a town of 800 inhabitants. The capital stock amounts to \$500,000, and last year a dividend of 12 per cent. was declared, besides accumulating a surplus. The mill is magnificently situated. Besides a large water-power from the Tar river, an equal amount of steam is employed. Mr. J. H. Ruffin is superintendent, secretary and treasurer. It is under his administration that the mill has grown to such large proportions. Yarns exclusively are made here.

The woodworking industry has grown considerably since my last visit to Rocky Mount. There are now two large factories which supply the Northern market with finished material, such as ceilings, moldings, etc. One of these was started two years ago on a small capital in the hundreds. The plant is now valued at \$20,000. This is merely a sample of what industry and enterprise have done in a favorable location.

Just to the east of Rocky Mount is one of the finest timber belts in the South. The excellent railroad connections make it possible to put this timber on the market. The rapid increase of railroad facilities which Rocky Mount has enjoyed for the last four years has greatly expedited the woodworking industry.

It is not to be supposed that because Rocky Mount is becoming a prominent tobacco market it has ceased to be a cotton market, although, as may be gathered from what has been said above, it is no longer an exclusive cotton market. However, the culture of cotton still receives its due attention, the rich cotton-growing land not being by any means neglected by the cotton planters, and its facilities for shipping make Rocky Mount a market unexcelled in proportion to its size.

Rocky Mount is not a boom town. No real estate craze has ever taken possession of its citizens; no fictitious prices have ever been maintained; no old fields miles away from town have been laid off and held at fabulous prices; none of its citizens have thrown away their money on old fields and swamp lands; consequently Rocky Mount has had no collapsed boom, and thus has never been crippled from such cause. Its business is on a solid basis, being founded not on wind, but on manufactures. During the present stringent condition of financial affairs it has suffered, perhaps, the least of any town in North Carolina. Business men have money with which to do their business, and can get all they want. This is due to the strictly legitimate business which is being done here. The tobacco trade has brought in money, and consequently business men are on a more substantial footing than most of the towns of this section.

The Bank of Rocky Mount is one of the most substantial institutions in North Carolina. The following report up to the sixth day of March, 1893, as to its condition will give an idea of the character of this bank:

RESOURCES.	
Loans on real estate.....	\$ 17,192 46
All other loans and discounts.....	155,906 52
Overdrafts.....	2,117 40
Due from banks.....	17,360 97
Banking-house and lot.....	5,000 00
Furniture, fixtures and supplies.....	1,400 00
Cash items.....	11,125 06
Gold coins.....	4,915 50
Silver coins.....	1,619 75
United States and national bank notes.....	6,331 00
Nickles, cents, etc.....	533 97
Total.....	\$223,502 63

LIABILITIES.

Capital stock paid in.....	\$ 35,000 00
Surplus fund.....	15,000 00
Undivided profits.....	5,247 79
Deposits subject to check.....	153,960 93
Due to banks.....	832 14
Cashier's checks outstanding.....	655 05
Time deposits.....	12,806 72
Total.....	\$223,502 72

At present there is an unprecedented demand for dwellings here. So great is this demand, in fact, that it cannot be supplied. There is not a single dwelling-house in town which can be rented. A large number of contractors are constantly busy, and new houses are going up all the time, not small, cheap ones, but large and comfortable.

In Rocky Mount there are one Presbyterian, one Baptist, one Episcopal, one Methodist and three colored Baptist churches, three good schools, one opera-house, two hotels and two newspapers, the *Phoenix* and the *Argonaut*.

Here are some of the investment companies of this town: The Atlantic Coast Line authorities have bought 175 acres of land for investment outside of their shop lots. Capt. John F. Divine is president of the company which has made this purchase. Thus the system has shown its faith in the town which it has selected as its railroad centre in North Carolina. A Norfolk corporation has invested in 177 acres.

Chief among these investment companies is the Rocky Mount Improvement & Manufacturing Co. This company owns 368 acres. Mr. J. H. Logan, of Pittsburg, is the general manager, and Mr. J. H. Arrington, of Rocky Mount, general agent. The main office is here, a branch office being maintained in Pittsburg. This company consists of Pittsburg capital entirely. The land which it owns consists of the finest sites for building in the corporate limits of the town. It is not swamp land nor old field land so far from town that you cannot find it, but good building sites in the corporate limits and close to the business part of the town. Many residences have been built on these sites, and the company is offering liberal inducements for the location of factories on its property. This property extends northward on both sides of the Atlantic Coast Line and the Tar river and out to the property of the Rocky Mount Cotton Mills. It has been laid out in lots, and streets have been graded and fitted up in the best style. Several large tobacco leaf houses have been erected on this property, and many neat and comfortable dwellings are now building. Manufacturers in search of a location for their plants naturally turn their attention to this property because it is the manufacturing part of the town. Outside of this the company can show a safe profit of 12 to 15 per cent. to investors in its property. Mr. Arrington, general agent of the company, is one of Rocky Mount's most enterprising citizens. He is a young man of energy, intelligence and education, and is a sample of what enterprise and brains will do in a good growing town. He has managed the affairs of this company in such a way as to make investments in its property of the safest and most profitable character.

Much has been said heretofore about the situation of Rocky Mount, its distance from New York and Baltimore, its climate, etc. I will simply repeat that the increased railroad facilities of the Atlantic Coast Line and the increased speed in trains have reduced the distance from New York to thirteen hours, from Baltimore seven and a-half hours, from Richmond, Va., four hours. Nothing further needs to be added as to the healthy, delightful climate which this section enjoys at all seasons of the year, with no extremes of temperature. Rocky Mount is bound to go forward, and to go forward fast.

In the ordinary nature of things, the growth of the next two years will be in

compound proportion to the past. With a population of 3000 now, before the close of 1894 the people here confidently look forward to 6000. In 1890 the census gave a population of 957; in 1892, 2500, an increase of 190 per cent.

It must not be supposed that as yet Rocky Mount enjoys all the advantages of a great city. Such could not be expected in the ordinary course of things. The authorities are now endeavoring to secure electric lights, water works, and a large, new, modern hotel. The Hammond House, which at present is the commercial hotel, is a well-kept, home-like hostelry, but a larger and more modern building is needed and is in prospect. During the next two or three years we expect to see all of these improvements, and in addition an ice factory, brick-yard, canning factory, and a foundry and machine shop. W. H. W.

How to Stop Levee Breaks.

MERIDIAN, MISS., July 2.

Editor Manufacturers' Record:

I have just read in June 30 number the article by Geo. B. Boomer, of Sulphur Springs, Texas, entitled "A Possible Solution of the Mississippi Levee Problem," and I believe it to be a valuable suggestion, which if followed would in time give absolute protection for the overflow district.

I recognize that it would not be practicable to build the banks up to the required height entirely by the deposit of sediment, but by this method a strip of ground might be built up of sufficient width to make an invulnerable base for a levee of the required height. Its operation would necessarily be slow, and at its inception expensive, but persevered in it would be secured in time.

In this connection, through the wide influence of your journal, I wish to call the attention of all interested to a practicable method of closing any break that may occur in the levee, which by all methods tried has proved impossible.

First, to stop the extension of the break, procure a sheet of duck or other similar material of a length somewhat greater than the break, and of a width sufficient to cover some distance beyond the base of the levee on the outside, and to extend riverward beyond the reach of the strongest current passing through the break. Load the river edge, and far enough around the corners to reach the crown of the levee, with weights of some kind, small rocks or pig iron, and sink that edge in place.

Of course it would not be very easy to do, but with the help of one or two steamers and sufficient other boats and lines it could be done. This would prevent the further washing and widening of the crevasse. Next procure a net, of say half-inch rope, with large meshes sufficient to prevent a sack of sand from passing through. Make this the same size as the sheet, and lay it in the same manner, but keep a line attached to each corner outside the levee. After it is laid, pull up one corner where it can be held and throw sacks of sand on it to close the break on one side, using the net simply to prevent the sacks from being washed away. A sand bag will almost stay in place without aid, but the lines of the net offer little resistance to the current, and are an additional safeguard. Thus the levee could be built across with the sand bags, and the break ultimately closed.

Necessarily this is only a brief outline of the plan, and the details would require careful elaboration, but when I read of the immense damage of levee breaks, such as one recently occurring below New Orleans, and the expensive, frantic, but futile efforts made to stop it, I am impelled to suggest that you call attention to the matter.

By having a few of these sheets and nets on hand, scattered along at easily accessible places, any break could be checked before it reached considerable proportions. It

could be stopped no matter how deep and wide, but, of course, policy would indicate the earliest possible action, both because of the increasing expense and the early checking of damage. A. W. SOULE.

Notes From Alexandria.

[Special Cor. MANUFACTURERS' RECORD]
ALEXANDRIA, IND., June 30.

The various factories of the United Window Glass Co. are in process of construction, and furnishing employment to a large number of workmen. It is expected that the works will be in operation by October 1. They will employ 2000 hands.

The New Albany Rail Mill Co. has completed foundations for its steel plant. The railroad switches are all in, and a large part of the machinery and material for the buildings on the ground. The company expects to begin operations September 1 with 1000 employees.

The Birmingham Safe & Lock Co.'s plant is nearly completed; expects to commence in July with fifty-five employees.

The addition to Lippincott's Lamp Flue Factory will be finished and in operation by October 1, employing 300 additional hands.

The De Pauw Plate Glass Works, now closed down, will resume July 17 with 450 hands.

All of the other glass companies, planing mills, quarries, etc., are fully employed, and new concerns are starting up.

Negotiations are very nearly closed for the location of the Kelly Axe Manufacturing Co.'s plant, and it is expected that this important industry will be completed and in operation by January 1 next. It will employ 750 hands, and will be the largest axe manufacturing plant in the world.

In building operations some 300 to 400 residences have been completed or are in process of construction the present year. Many of the residences are large and costly, and would be a credit to any city.

Of business houses, the entire district from Washington to Church street on Harrison, which was destroyed by fire during the past winter, has been rebuilt by fine blocks of two and three-story bricks with stone or iron fronts.

The new opera-house, costing \$30,000, is now receiving the finishing touches, and will be open July 15.

Odd Fellows' Hall, a fine three-story brick structure on Tenth street, is now completed and every room occupied.

The Masonic Temple, another three-story iron front building, is nearly completed, and the stores on the ground floor rented. The second story will be fitted up by the Alexandria Club, a social organization comprised of the principal business and professional men of the place.

The foundations are now being prepared for a fine \$30,000 hotel on the corner of Harrison street and Broadway, and this imposing structure will be completed during the coming fall. The hotel is to be first-class in all respects, containing 100 rooms and provided with all modern conveniences.

The C., C., C. & St. L. R. R. has commenced work on its new passenger station at West and Broadway, and is making a great many extensions of its tracks and switches.

The fine new hospital building on Broadway and Sheridan avenue has been completed and opened to the public during the past few days.

The two new school buildings will cost, exclusive of the locations, \$15,000 each, and are now well under way and will be completed in time for the fall session. These buildings are not only commodious and convenient, but are exceedingly attractive in appearance, the first stories being of rough stone, the second story and gables of pressed brick, with slate roofs. The towers and other architectural adornments give an air of elegance to these buildings not usually found in cities of

many times the population of Alexandria.

Broadway has been graded, curbed and paved from Harrison street to the new railroad depot.

Harrison street is being graded now and will be paved with vitrified brick the entire length.

Several miles of street improvements and bridges at various points, connecting the southern and northern parts of the city, have been contracted for, and, under the direction of its progressive mayor and city council, the little city has taken on quite metropolitan airs.

The electric-light works will be in full operation in a few weeks. The telephone exchange is already in operation and an assured success, and the population of the place is being added to daily.

THE large 16-pot furnace at the Lippincott works has been completed by Contractor Matthews. The furnace is a beauty and is the largest one in the United States.

From the foregoing review it will be seen that Alexandria is growing right along in spite of the prevailing financial stagnation. That's the difference between a solid town permanently established and managed on business principles, with money behind it, and "boom" towns, founded on speculation and run on wind.

GENERAL NOTES.

Brief Mention of Various Matters of Current Interest.

By retiring the 8 per cent. city bonds due July 1 and substituting 5 per cents the city of Norfolk will reduce its interest charges \$5670 yearly.

THE bankers of Roanoke, Va., have begun a movement in favor of a State banking association. A call for a meeting to be held in Richmond in October to consider the matter has been issued.

THE new water-works plant at Atlanta, Ga., which has been under construction for two years, is now completed, and the water was turned on on the 27th of June. The complete system cost over \$500,000, and includes a reservoir with a capacity of 156,000,000 gallons, two pumping stations and a filtering plant. The piping used was made at Bessemer, Ala., and the engines are of Holly make. The water is pumped from the Chattahoochee river.

CONTRACT for building a wharf and out-buildings at the quarantine station, Fisherman's island, near Cape Charles, Va., has been let to J. H. Hathaway & Co., of Philadelphia, at \$13,995.

A NUMBER of New Orleans gentlemen, including Numa Landry, David Baldwin and Charles Carroll, have purchased the Grand Terre island in the Gulf of Mexico and will erect a number of cottages on it. The island has seven miles of beach and will be improved and beautified for a summer resort.

THE Camden (S. C.) Board of Trade has adopted resolutions favoring the repeal of the silver bill and thanking the New York banks for the assistance they have rendered in relieving the financial trouble.

It is currently reported that a number of New Orleans engineers have a project afoot for the construction of a large canal in Vermilion parish, La. It is to connect with a water outlet to the Gulf, and it is proposed to commence about twelve miles south of Crowley and dig a canal sixty feet wide and four feet deep, and put in a five-foot levee connecting this with Bayou Quene de Tortue, which stream will be dredged to the Mermatau river. The successful issue of this scheme would prove very beneficial, as it will assure water transportation for a large rice area, and rice

lands adjacent to the canal could be flooded. Right of way has been secured, and the work is estimated to cost about \$100,000. Messrs. H. Daspit, C. M. Pasquire, D. M. Broussard and Philip Hoelzel, all of New Orleans, have lately been investigating this enterprise.

During the past three years the Merrill-Stevens Engineering Co., of Jacksonville, Fla., has built and launched nine vessels varying from a 30-foot steam launch to the 700-ton dredge boat Florida, now operating at Dame's Point. It now has three steel steamers under construction at its works.

CONTRACTS were closed in New Orleans recently by President Conrad, of the lottery company, for all the necessary lumber and material for the buildings of the new headquarters of the company to be established in Port Cortez, Honduras. The new buildings will be erected upon plans drawn by Messrs. Thomas Sully & Co., architects, of New Orleans. It is expected the buildings will be ready for occupancy on January 1, 1894. A number of mechanics sailed for Port Cortez on the 6th by the Macheca Line of steamers.

THE contract for building the new courthouse at Cumberland, Md., was awarded on Saturday last to Messrs. Brown & Garber, of Wilmington, N. C. Their bid was \$97,500 for the completion of the building, with the heating fixtures and wiring for electric lighting. The contractors expect to finish the building and have it ready for occupancy within twelve months.

A CHARTER was granted last week at Norfolk to the Columbia Peanut Co., with the capital stock not less than \$20,000 nor more than \$60,000, in shares of \$100 each. The principal office is to be in Norfolk, with branch offices in such other places as may be necessary. The company will conduct the peanut business in all its branches, and also handle any other product. The officers are as follows: John L. Roper, of Norfolk, president; W. H. Thomas, of Baltimore, vice-president; Louis Hornthal, of Plymouth, N. C., treasurer; O. A. Sledge, of Norfolk, general manager. E. V. White, of Norfolk county, Va.; L. H. Hornthal, of Plymouth, N. C., and the above comprise the board of directors.

THE canning factory at Tupelo, Miss., is now in active operation and a large trade is expected to be done during the summer. Receipts of early vegetables at the factory are quite large, and the canning of peas and beans has been progressing at a lively rate during the past month.

THE Mobile & Ohio Railroad carried a train of twenty-seven tank carloads of red snapper fish last week from Mobile to Chicago. The fish were alive and the water had to be changed several times a day.

LOOSE leaf sales of tobacco for June in the Danville (Va.) market amounted to 3,328,827 pounds, a decrease of 1,048,593 pounds from 1892 sales. Sales from October 1 to June 30 aggregate 34,465,010 pounds, an increase of 2,391,507 pounds over the sales for the last tobacco year.

THE Armstrong Hotel, in Rome, Ga., has been leased to J. P. Longley, formerly at the Montgomery White Sulphur Springs. Mr. Longley proposes making a number of improvements and will endeavor to attract the attention of Northern tourists to the beauties of Rome and its surroundings.

A NUMBER of capitalists of Statesville, N. C., met last week and took preliminary steps towards organizing the Iredell Tobacco Co. The capital stock of the company will be \$20,000, and the following-named gentlemen will be the shareholders: J. A. Cooper, H. C. Cowles, W. D. Tur-

ner, Chas. H. Armfield, Dr. M. R. Adams, Dr. L. Harrill and B. H. Adams. A charter has been applied for, and Messrs. Cowles, Turner and Dr. Adams appointed a committee to select a suitable site, on which a large factory building will be erected. The company proposes to manufacture at least 100,000 pounds of tobacco the first year, and the business will be pushed and enlarged to the utmost extent.

THE Louisiana building at the Columbian Exposition will be dedicated August 10 with appropriate ceremonies. Governor Foster and his staff will attend in a body. The representatives of the legislature, national commissioners and State officials will also be present. The director-general of the World's Fair, Mrs. Potter Palmer, the members of the general commission and other distinguished persons will take part in the ceremonies, and prominent Louisiana orators will deliver addresses. It is hoped that all the military organizations, social clubs and benevolent organizations from Louisiana will make the effort to be there in a body or to send representatives.

JUDGE N. A. CRAVENS, of Willis, Texas, is now in Houston, Texas, and is organizing a joint stock company to put up a valuable plant in Houston and manufacture upon an extensive scale the Rembert lint cotton cleaner, an invention for raising the grade of cotton. It is proposed to capitalize the concern at from \$50,000 to \$100,000 and begin operations at once for the manufacture of these machines, so as to command as much of the ensuing season's business as possible. Mr. Henry Rembert, the inventor of the roller cotton compress, is the originator of the cotton cleaner.

THE Florida Grape Growers' Union and Market Association held a meeting in Bartow, Fla., last week to discuss the present market situation. Telegrams received from New York and Philadelphia stated that grapes in those markets were bringing thirty cents per pound. The first carload of grapes sent out by the association left Orlando last Wednesday. G. H. Wright will be sent to Chicago to represent the association at that point and attend to marketing grapes sent there.

J. H. WATTERS, of Anniston, Ala., applied for a patent on a water-wheel which he has invented. It is said that under small pressure of water the wheel yields a high efficiency.

THE Louisiana Land & Development Co., Limited, of Abbeville, La., has been incorporated for the purpose of encouraging immigration to Louisiana and securing industries of every kind and to aid in developing the State's resources. M. B. Hillyard, W. D. White, W. O. Pipes, D. L. McPherson, Joel Moody and Lou A. Minx are the incorporators, the two last-named gentlemen being, respectively, president and secretary. They have placed the capital stock at \$100,000.

THE twenty-sixth meeting of the Foundryman's Association was held at the Manufacturers' Club in Philadelphia, Thursday evening, June 6. Several interesting papers were read, and the report of a committee on the present condition of the foundry trade brought forth considerable discussion.

THE new export tax of \$3.00 per 100 kilograms (220 pounds) on coffee and two and a-half cents per 100 kilograms on heniquen, imposed by the Mexican government, went into effect on July 3. It is believed that the tax will yield about \$100,000 to the revenues; but the government has ordered it with great reluctance, and will remove it so soon as can be found practicable.

MECHANICAL.

Notes on World's Fair Exhibits.

[From our own Correspondent.]

CHICAGO, June 19.

Among the many interesting machinery exhibits at the World's Fair, the following are deserving of note:

R. D. WOOD & CO.

On the broad aisle between the main building and the annex of machinery hall, and opposite the power plant, is the extensive exhibit of R. D. Wood & Co., of Philadelphia, manufacturers of hydraulic apparatus, gas holders and general machinery. Lying across one corner of their space they have a 72-inch cast-iron water pipe on a platform with steps leading down into either aisle, and, judging from the number of people who climb up and pass through the big conduit, it is a very attractive feature. The gentleman in charge of the exhibit thinks he will have to replace the steps several times before the fair closes. In this same line they show a new class of specials, as gate valves from thirty-two inches downwards, standpipes and indicator posts. The most striking feature of this exhibit to the casual observer is the arrangement of fire hydrants, which forms a tall fence, so to speak, about the office space. Over forty hydrants are used, and on each one is printed the name of the city for which it was made. The longest ones, being about eleven feet in length, are used in the back, and gradually shorten till the front ones are not much taller than the top of the office desk.

Though they have a space of 66x25 feet they cannot exhibit gas holders, so photographs are used. In this line they show their Mitchell's patent scrubber, Hopper's gas governor, and a bench of retorts with Patton's patent self-sealing mouthpiece, in which the pressure for sealing is applied at three points. This should be of interest to gas men. Their Taylor revolving bottom gas producer is too well known to be anything but casually mentioned.

In the east half of their exhibit they show the new branch of their business, that of hydraulic tools, of which they are the only exhibitors. This plant is a complete one, with its pressure pump for 750 pounds per square inch, an inverted accumulator giving a constant pressure in the mains leading to the machine, one eight-foot gap seventy tons plate closing fixed riveter, a triple power flush top fixed riveter with head of new design, the slide being cut away to enable the operator to get a clear view of the work; a new sliding body portable riveter of heavy design, a 12-inch gap bear riveter suspended from a four-foot vertical lift on riveter crane with walking pipes, and a continuous hydraulic intensifier for supplying water at 7800 pounds per square inch, which enables a low-pressure system to be used for delivering high-pressure water for individual machines. The company's representative here is John Platt, Asso. M. I. C. E.

E. & B. HOLMES, BUFFALO, N. Y.

This firm has sixteen different machines on exhibit representing every branch of their business. Of these ten are barrel-making machines, being the only exhibit of the kind at the fair. The remaining six machines represent the standard specialties, that of heavy planers and resaws, all of which are belted and in active operation. The firm's agent here takes particular pains to call the visiting mill men's attention to the Holmes latest improvement, the variable feeding device, in which they have solved the problem of regulating the speed of feed of woodworking machinery. All mill men have long realized the need of some such device, and will hail with delight this simple yet effective improvement. The result is accomplished by the aid of two disks located in the same position in

the rear of the customary large pulley; in fact, the large pulley is simply made solid. The other disk, upon which runs the power belt, can be moved in any direction by the use of two levers. This disk, which is faced with a strong and durable fibrous composition, is set at an angle so only one edge will come in contact with the other, and, of course, as this revolving edge is raised or lowered, the speed of the machine is decreased or increased at the will of the operator. The one other machine that is shown with unusual pride is their new automatic knife grinder, which can be adjusted and regulated to suit any conceivable style of blade. They also show their well-known line of suction fans:

RIFE'S HYDRAULIC ENGINE MANUFACTURING CO.

There can always be seen a large crowd of visitors around the big pool in machinery hall, not that the sight of the spouting fountains is so attractive, but because one of the finest displays is made around the pool, that of hydraulic appliances, and not the least among the many exhibits is that of the Rife's Hydraulic Engine Manufacturing Co., of Roanoke, Va. This company has here at work the largest hydraulic ram ever built, having a capacity of 300 gallons per minute, and, among other things, it claims that it has solved the problem of economical water supply. Such powerful rams can be used in irrigation, for railroad tanks and small town supply. It is constructed upon an old principle applied in a new way, leaving few wearing parts, and making the machine reliable and durable. It also makes a double-acting ram which proves a mystery to the untrained in hydraulic engineering. This machine will use muddy creek water to pump spring water where the latter does not flow a sufficient amount, and the two waters will flow through the machine side by side and still not mix. This work was accomplished in the old-style rams by the use of rubber diaphragms, but this was always very unreliable. Another great improvement is in the air chamber, by which there is no possible danger of the machine becoming water-logged. The company guarantees to deliver one-sixth of the water used to an elevation five times as high as the fall. It shows all sizes of machines, and is getting plenty of advertising by this display.

BATES MACHINE CO., JOLIETT, ILL.

The Bates Machine Co., of Joliett, Ill., manufacturers of engines, barbed wires and horseshoe-nail machinery, is represented in machinery hall by a very fine high-pressure Corliss engine of 300 horse-power, used in driving the power shafting of the building. One of the most recent improvements in valve motion is found on this engine. It is known as the folding motion, entirely dispensing with the claw blocks and grab hooks, thereby reducing the ordinary Corliss movement by sixty parts, leaving only two plain wrist pins for wear, and is absolutely sure in action. The induction valves are plain sliding valves closing with the steam, producing a much straighter induction line and a sharper cut-off corner, closing quicker and relieving the work of the dashpots. One other improvement is in its automatic stop, which is self-removing, preventing any possible accident through the negligence of the engineer to remove the wrist. Both of these features prove very interesting to the visiting engineers.

THE FLINT & WALLING MANUFACTURING CO.

The Flint & Walling Manufacturing Co., of Kendallville, Ind., manufacturers of pumps and wind-mills, has two exhibits, one of pumps and a pattern mill in machinery hall and quite a display in the wind-mill exhibit out of doors, where it has seven of its famous "Star" mills erected. It also has a special building in which it shows its pumps and cylinders in many different designs, and a model system of

residence water-works. Its exhibit in machinery hall is near the pool, where it has a very interesting display of pumps in operation. One of the attractive ornaments of its space is a small nickel-plated steel wind-mill with brass and copper fans and a vane operating a force pump, which furnishes a supply of water for a neat little bronze "boy and umbrella" fountain.

THE HANCOCK INSPIRATOR CO.

No exhibit attracts steam users more than the exhibit of the Hancock Inspirator Co. at section 33. Here it has a working exhibit of its far-famed inspirators and injectors for feeding steam boilers with water. With steam pressure of thirty-five to 200 pounds water at a temperature of 120° is lifted and forced against pressure. No matter whether the pipes or injector is hot or cold they show a steady incourse of water to the highest point of steam and reduction of water delivered to 50 per cent. of its maximum. The inspirator has a world-wide reputation, and is known wherever steam is generated in a boiler. It has also many new features which are gladly shown to all interested parties by the agent, Charles E. Randall.

ATLAS ENGINE CO.

The Atlas Engine Co., of Indianapolis, Ind., has one of its specially designed engines for electric purposes of 1000 horsepower in use. It is a 14x24x30-inch double tandem compound condensing engine, running at 150 revolutions per minute. The fly-wheel is twelve and a-half feet in diameter, with 74-inch face, and is driving a 10,000 incandescent-light dynamo. The engine is fitted with the Cam valve movement and Knowles independent injection condenser. Mr. W. H. Ruef, one of the company's traveling men, is representing it here.

TROY LAUNDRY MACHINE CO.

The Troy Laundry Machinery Co. has a working model of a laundry fitted up with the latest improved machinery for washing and ironing clothes and linen. It shows only metal washers, claiming that they are far superior to wood in capacity and durability. The duplex mangle of 180 inches, which dries and irons table linen on both sides at the same time, is also shown. The rest of the exhibit consists of a model drier, shirt ironers and the various machines necessary to a well-equipped laundry.

THE LAIDLAW-DUNN-GORDON CO.

The Laidlaw-Dunn-Gordon Co., successors to the Laidlaw & Dunn Co. and the Gordon Steam Pump Co., although unable to make the exhibit it desired on account of lack of space, is making an interesting pump and water display with twelve of its steam pumps in operation. The exhibit includes one 14x20x12x18 compound duplex piston pumping engine, an underwriter's 14x7x12, which has been complimented by many of the leading engineers as one of the finest working pumps they have seen; it has brass plungers, bronze piston rods and valve rods and brass lined stuffing boxes; area of water valves 64 per cent. of piston area, and area of steam and exhaust passages 20 to 50 per cent. greater than in standard sizes; six standard duplex pumps, varying from small boiler feeders to 14x8x10 elevator pump; one single direct double-acting Excelsior pump; one vertical boiler feeder, crank fly-wheel and plunger pattern, and two deep-well pumps. Some of the peculiar features that are worthy of note on the Laidlaw-Dunn-Gordon Co.'s standard duplex pump are the sliding block valve motion, which consists of a cast-steel block fastened to the end of the cast-steel lever of the rock shaft. This block slides vertically through the slot on a heavy square steel space securely bolted to the piston rods. The flange is removable and interchangeable brass water cylinders are used. The valve seats are screwed in, and there-

fore cannot come out when an unequal expansion of the metals occurs in pumping hot water or from any other cause. Their large wearing surfaces, strong rods and valve joints are all worthy of note. The pumps are discharging into the water tank in the centre of machinery hall from their exhibit at column I, 33.

THE NILES TOOL WORKS CO.

The exhibit of the Niles Tool Works Co., of Chicago, is located at column J, 50-52, in machinery hall, and contains an excellent display of the well-known machinery tools made by this company. Among them should be noted a large iron planer, twelve feet between housings, ten feet between cross rail and table and with a 30-foot bed. This has two heads on the cross rail and two slide heads. Without board, housings and head for planing work of extreme width this ponderous machine weighs about 190,000 pounds. All movement of heads and other parts are by power, anti-friction gearing being used. Two of these machines were built at the same time, one now being in use by the General Electric Co. at Lynn, Mass., and the one on exhibition for the Lake Erie Engineering Works, of Buffalo, N. Y. A horizontal boring, drilling and milling machine here shown is unusually heavy and substantial. It has a horizontal traverse of twelve feet, a vertical movement of six feet and a bar traverse of forty-eight inches. One of the latest design boring and turning machines, with a six-foot swing and every modern improvement for rapid boring and turning work, has attracted considerable attention. A heavy forge lathe, made extra heavy for forge work, with a 63-inch swing and 30-foot bed, and a Niles No. 3 screw and bolt machine are two other interesting machines in this exhibit.

WEBSTER MANUFACTURING CO.

One of the handsomest exhibits in machinery hall, and the only one of its kind, is that made by the Webster Manufacturing Co., of Chicago, of some of its specialties. In a large booth very tastefully designed it shows how grain is handled in an elevator in an economical and expeditious manner by the best improved modern machinery. From a bin the grain is discharged upon a spiral conveyor, the operation of which can be seen through glass sides. From this it is spouted upon a belt conveyor and carried to an elevator, which drops it into the bin again, thus completing the circuit. Overhead are shown some very fine examples of transmission of power by rope, cross drives, tension, carriages, etc. Rope drives are a specialty with the Webster Manufacturing Co., which sends out a superior class of machinery in this line over a wide extent of country. It also exhibits the "Lewis" improved gas engine, which for simplicity, economy, durability and safety is equal to any on the market. This engine is shown in operation running electric-light plant, thus demonstrating that for steady motion it is a perfect motor. In addition to the above it also shows its "steel plate" friction clutches in connection with the General Electric Co.'s exhibit in the electricity building, where the clutches are to be seen in operation on large dynamo shafts.

NIAGARA STAMPING & TOOL CO.

This exhibit comprises a full line of such tools and for such purposes usually used by tinsmiths, roofers and sheet-metal workers generally, such as folders, formers, seamers, crimping, beading, grooving and rim machines, burring, turning, wiring and setting-down machines, cast-iron and wrought stakes, roofing tongs, gutter tongs and slaters' tools in almost all shapes and styles, bench shears and snips, hand circle and slitting, circle ring and slitting, circle and edge turning and burring shears, squaring and slitting shears for foot-power in great variety in sizes from fourteen inches to eleven feet.

A full line of tinner's small tools, such

as punches, hand groovers, hammers, rivet-sets, chisels, coppers, etc., enclosed in a six-paneled revolving oaken showcase made a very effective display. This exhibit also comprises power and foot presses, squaring, circling and slitting shears, power forming rolls, double seamers, etc. Three types of power squaring shears are shown—a 36x15-inch power gap shear, a 10-foot combined foot and power squaring shear and a 36x15-inch gap shear for medium work. This company makes nine different types of power shears in sizes from twenty-five inches to eleven feet and in capacity from No. 18 iron to one-quarter-inch plate. Strength and good workmanship combined with grace of outline and excellence of finish are the noticeable features of these goods. In circle and slitting shears the company makes seven different styles, five of which it exhibits, capacity ranging from No. 22 gage iron up to one-eighth inch, and size of circles which can be cut ranging from three inches up to five feet. A noticeable feature of these goods are combined ring and circle shears, now much in demand for armature work. An excellently designed double seamer is shown operated by power and made in three sizes—9x7, 14x16 and 20x27. Presses, of which there are five styles shown, are made in seventeen styles and forty-five sizes. Good design and finish and great accuracy in detail, with precision in operation, are the distinguishing features of those exhibited. This line comprises single and double-action presses, punching presses, double-crank horning, wiring, blanking, stamping, drawing and embossing presses. A full line of foot presses for light work should also be mentioned. Some special machines for heading, flanging and gang punching must not escape notice. All the power machines exhibited except the double seamer are fitted with the "Niagara" safety clutch, which experience has demonstrated as a very reliable device.

Under the head of can-making tools there are machines for hermetically preserving fruits, vegetables and meats as follows: Can-making dies to cut and stamp out the tops and bottoms and caps for round cans, meat and asparagus cans. Rollers and formers to form up the bodies in cylindrical, pyramids or rectangular shape. Folders to form the sides of seams so as to lock together. Soldering devices, technically termed "floaters," to dip the cans in solder to solder joints. Soldering coppers to hand solder; charcoal, gas and gasoline furnaces and fire pots to heat the same. Soldering frames and blocks upon which to solder the can bodies together. Swages for can mouths, and solder molds are also shown, in which molten solder is poured to mold it into bars, and solder cutters both for hand and power to cut the bars into "drops." Capping steels and capping irons are displayed for soldering on can caps, as well as a miscellaneous assortment of stamping, cutting, punching, forming, wiring and horning dies, wire and rod cutters, lever shears, punches, roofing, notchers, wire reels and straighteners. Taken as a whole the exhibit is good, and conveys the impression of much taste, technique and diversified mechanical skill.

FRASER & CHALMERS.

The World's Fair engine of Fraser & Chalmers shown at section F, south side machinery hall, has a rating of 1000 horsepower and is speeded at sixty-four revolutions. It is a four-cylinder triple expansion engine, having one high-pressure cylinder twenty inches diameter, one intermediate thirty-four inches diameter and two low-pressure cylinders each thirty-four inches diameter, the stroke being sixty inches. The course of steam is from the high pressure to the intermediate cylinder and then dividing to the two low-pressure cylinders.

The purpose of this novel arrangement of cylinders is to equalize the turning momentum and the strains and power exerted on each crank as far as possible.

These are nearly equal under a very wide range of power, which is impossible with a three-cylinder quarter crank engine, and also presents some advantages of economy of arrangement and distribution of dynamic forces over the three-cylinder triple crank engine.

All the steam cylinders are steam jacketed on the heads, which is important, as well as on the cylindrical surfaces. The valve gear is of the regular Fraser & Chalmers Corliss type, presenting some advantage in simplicity over the special full stroke gear, the cylinder being so proportioned that full stroke gear is unnecessary. But the gear will at once be seen to have novel features, the character and merit of which are as follows: The cut-off gear of the high-pressure cylinder is always under control of the governor, but the novelty appears in the cut-off gears of the remaining cylinders. If there are no sudden changes of load the cut-off should be constant in these other cylinders in order to secure a uniform minimum drop of power between these cylinders, the cut-off depending upon size of receiver and cylinders. But if the load were suddenly and largely reduced there might remain steam enough in the receivers to cause the engine to speed up or run away, even if all the steam were cut off from the high-pressure cylinder. On the other hand, also, with the sudden imposition of a great increase of load, the increased admission of steam in the high-pressure cylinder might not be sufficient to maintain the speed of the engine. To guard against these contingencies the cut-offs of the intermediate and low-pressure cylinders are connected with the governors by means of oil catenacts. A slow motion of the governor will not affect intermediate or low-pressure cylinders, the cut-off cams being held in position by springs. But any sudden motion of the governor transfers itself instantly to the cut-off cams, which after this influence has passed again slowly recede to their normal position. In short, the cut-offs of intermediate and low-pressure cylinders are changed only in emergency, and not long enough to reduce the economy of the engine.

Other details of the engine are of less peculiar significance, but are designed in accordance with the latest judgments of engineering skill. The crossheads are steel castings. The connecting pieces between the cylinders are made in halves, so that they may be taken apart for convenience in examining cylinders and pistons. The engine is, of course, used condensing, but the condenser in this case is not of Fraser & Chalmers' design, but one furnished by the Conover Manufacturing Co., of New York, for exhibition in connection with this engine.

THE MORTON MANUFACTURING CO.

An interesting exhibit is that of the Morton Manufacturing Co., of Muskegon Heights, Mich., at section 28, column K, 43. A number of the machines in this exhibit are in operation, and one in particular, a portable key-way cutter, cut a key-way three-quarters inch wide, seven-eighths inch thick and one foot through in one and three-quarters minutes. The machine is placed on the hub, and the bottom of the machine comprises a three-jawed chuck, two of the jaws being stationary and one traveling with screw and rod to rear of machine, and by turning up nut the machine is fastened almost instantly to hub. The cutter cuts on its upward stroke, so as it pulls the more the machine will hug the work, key-ways three inches wide and one and a-half inches deep and thirty-five inches through hub having been cut with this machine in thirty-seven minutes, including

time of attaching the machine. Another machine operating is a reversible universal shaper, which cuts a shaving two and one-eighth inches wide and one-sixteenth inch thick. This is a particularly solid and substantial piece of work, and its great power has attracted much attention. Recently one of these machines was tested in cutting cast iron with the 36-inch stroke machine, cutting on twenty-eight inches of iron. A cut was successfully taken two inches deep with one-sixteenth of an inch feed, and was accomplished, seemingly, without shock or jar to the machine. With the 24-inch machine a piece of wrought iron two and a-quarter inches square and twenty-four inches long was reduced to one-half inch in thickness in two cuts.

THE JOSEPH DIXON CRUCIBLE CO.

The Joseph Dixon Crucible Co., of Jersey City, N. J., has two exhibits at the Columbian Exposition. One is of Dixon's American graphite pencils in the northeast gallery of the manufactures building, and the other, covering all the other articles manufactured by the corporation, in the northeast gallery of the mines and mining building. The pencil exhibit occupies a space ten by fourteen feet, and forms a beautiful display of pencils in various designs. The company's exhibit of general and special graphite products in the mines and mining building occupies a space twenty-five by twenty-eight feet. A very handsome cherry facade fronts the space, while the sides are hung with tastefully-arranged portieres. Crucibles, retorts, ladles, stopper-heads and nozzles, graphite boxes, phosphorus chargers, resistance rods and devices, incandescent filament forms and other special goods made of graphite are shown in upright cabinets. In another case is shown the development of an electrolyte plate, in which process the use of graphite is an essential. In still another case are shown over fifty varieties of graphite, for as many different uses and under as many different names. There are also shown samples of graphite from all the principal sources from which that article is obtained. One very fine sample from the Island of Ceylon weighs nearly 300 pounds. Comfortable chairs with writing desks and stationery are provided for the free use of those who may desire it. The Dixon Company was the first to complete its exhibit, and its promptness brought forth a very complimentary letter from the chief of the department.

High-Pressure Boilers.

The Narragansett Electric Lighting Co., whose station in Providence, R. I., has been referred to and illustrated in the leading journals as the model plant of New England, is making additions which will largely increase the facilities of the plant, and an order has been placed with the National Water Tube Boiler Co., of New Brunswick, N. J., for a battery of 500 horse-power nominal, with an actual capacity of over 750 horse-power.

It is worthy of note that the National Company supplied the first boilers for this plant, the working pressure, which was then considered high, having been set at 140 pounds per square inch.

The advantages secured by high pressure in connection with triple-expansion engines were so marked that higher pressures still were thought advisable, and later the Babcock & Wilcox Co. supplied a battery of boilers of the most modern construction, with wrought-iron headers, saddles, etc. These boilers were used at a working pressure of 160 pounds per square inch, and the National boilers were made to conform to the same pressure.

The advance in the practice of steam engineering has been so marked that a boiler pressure largely exceeding any before used is now demanded, and the National Company now comes forward with

boilers for the Narragansett Company which will be adapted for a working pressure of 200 pounds per square inch, with a large margin of safety above, and which will illustrate results obtained by careful attention to details of manufacture and the best shop appliances for reaching the highest grade in mechanical construction.

The Pittsburg Gas Engine.

It is becoming rather late in the day to enter upon a presentation of the arguments in favor of the gas engine as a mechanism for furnishing power. Even when all the objections that can be raised against the gas engine are conceded as substantial, when the peculiar defects of the individual types have been admitted, the fact remains that this new motor has made its place. In efficiency it has already rivaled the steam engine, despite the limitations hitherto of a comparatively small range of size and capacity, while in adaptability to the wants of an endless variety of industries it has been a serious rival of the electric motor. At the same time it has met a necessity of modern methods of lighting and power by providing for electric generators a new motive agency, so that where electric circuits from a central station are not available, it has still been possible by its instrumentality to enjoy whatever electricity may yield of advantage and superiority. In other words, the gas engine is the great link between the old practice and the new in illumination and power, and its importance and value make a deeper impression every year upon the public mind.

These considerations have been influential with the designer of the Pittsburg gas engine and with the Fuel, Gas & Manufacturing Co., its builder. It was the conviction of the designer that the failure of gas engines of older and familiar type to meet the demands upon them was due to conditions which skillful engineering and careful construction could overcome. It was also the belief of the company that, furnished with such an engine as would realize its expectations as to economy and efficiency, it could not only secure a position in the field as it now exists, but create new markets that were supposed to be entirely beyond the range of gas as motive power. The Pittsburg gas engine is not merely a happy thought. It is the product of deeply-studied design, corrected, refined and perfected by a long series of experiments, in which each detail has been taken alone and made to carry the evolution of the new type to the furthest point possible to the art.

The accompanying illustration shows one of the Pittsburg 100 horse-power engines coupled direct to an electric generator, which it runs smoothly and efficiently. As the principles of design and operation are the same for all these engines, a brief description of a single example will embody the characteristics of the whole class. Its economy of space, its peculiar adaptability to certain vital improvements and the growing demand for an upright engine led the company to adopt the vertical type as its standard. Specifically, the most striking innovation, and one designed to mark an epoch in gas-engine history, is the use of a crank chamber to enclose the running bearings and lower end of the cylinders. This chamber is filled almost up to the shaft with a mixture of oil and water, into which the crankshaft and connecting-rods splash at every revolution, so as to completely deluge the bearings, piston and interior of the cylinders, thereby not only affording copious self-lubrication, but also supplying the hitherto unattainable jacket to the piston. Oil for the crank chamber is introduced through the main bearings, which are supplied from the only two oil cups on the entire engine. A simple pipe connection with a city main supplies the necessary water. Another pipe, serving to carry off the overflow, is made, by means of a funnel head, to indicate the

level of the lubricants in the crank chamber.

All the Pittsburg gas engines are built with two cylinders on a single shaft, and, as usual, abnormal heating is obviated by the employment of water jackets. Each revolution made by the engine operates valves admitting the gaseous fuel alternately to the one or the other cylinder. As the period of admission is controlled by a positive action, the crankshaft receives an impulse once each revolution, no matter what the load, but the energy of that impulse is predetermined by an independent piston valve.

In order that the maximum amount of energy may be developed by the explosion of the gaseous fuel, there is but one valve that the relative amount of gas and air can bear to each other. This value has been determined by a prolonged series of chemical analysis, and the Fuel, Gas & Manufacturing Co. now designs its measuring piston valve so that it shall always admit gas and air in their correct proportion for producing their correct maximum result, but at the same time vary the total amount of mixture directly as the work of the individual piston stroke.

Another important departure in gas-

by a cam. At just the proper moment the arm is made to break by an electric circuit, and the arc thus formed, intensified by the use of an induction coil, ignites the fuel instantly. As the arm is actuated by a positive motion, there can be no failure to produce a spark and no failure in the resulting ignition of the fuel. In order that the engine may be entirely self-contained, the electric current is supplied from a galvanic cell. If preferred, however, the requisite energy may be taken from a dynamo circuit.

In an article of this kind it is not necessary to mention at length all the details of the engine. It may be added that each is equipped with a moderately heavy fly-wheel, a band-wheel, where belting is to be used, the necessary gas bag, and all minor but customary adjuncts. There remain, however, two or three general features of the Pittsburg motor to which we must not fail to call attention. Though entirely self-contained, yet by reason of its simplicity of design and the distributive arrangement of parts, each detail of the engine is at all times readily and completely accessible. All stop-cocks and faucets are conveniently arranged on one

The test was made using city illuminating gas as a fuel. This is more expensive than common fuel gas, which nowadays is quite generally supplied through city mains, or may be economically manufactured even on a small scale; but the company preferred to fulfill all the most exacting conditions, in order that any individual might decide for himself whether or not its engine was available for his own special conditions.

The gas meter employed was a standard one, manufactured by the Fuel, Gas & Manufacturing Co., of Pittsburg, Pa., and guaranteed correct within 1 per cent. The springs for indicator work were carefully tested, and the results corrected for any small error. The indicators were placed directly upon the cylinder cases. For measuring the delivered horse-power a Prony brake was used, having a wheel twenty-seven and five-eighths inches in diameter, and an arm twenty-nine and one-sixteenth inches in length. The indicated horse-power was calculated in the usual way, i. e., from the number of revolutions and effective pressure.

The duration of each of the three runs made, A, B and C, was two hours.

Samples of both the supply and the exhaust gases were sent to the "Pittsburg Testing Laboratory" to be analyzed. From the results of the analysis reported by that firm it was found that a cubic foot of the gas used in the test will, if completely burned, yield 434.3 B. T. units of heat. Though this is a very low value per cubic foot, it only indicates that the Pittsburg gas is a much better illuminant than fuel, and does not in any sense favor the gas engine; on the contrary, it rather reduces the efficiency by the unavoidable heating of superfluous air.

With the conditions of the test as given, the energy received and expended per hour was divided as follows:

Total energy received in foot-pounds.....	55,200,000	40,800,000	16,750,000
Total energy expended:			
Indicated work in foot-pounds.....	21,280,000	14,360,000	3,200,000
Water jacket in foot-pounds.....	23,900,000	17,800,000	1,382,000
Exhaust, radiation etc., in foot-lbs.....	10,020,000	3,740,000	12,168,000
Efficiency for one horse-power.....	39 per ct.	35 per ct.	19 per ct.
Efficiency for H. horse-power.....	33 per ct.	28 per ct.	

A New Cylinder Lock.

An important improvement in the construction of locks has been made by the Miller Lock Co., of Philadelphia. It is a lock of the cylinder type, and forms a part of the company's exhibit at the Columbian

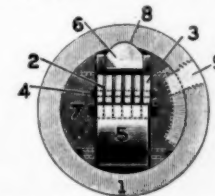


FIG. 1.—END VIEW OF TUMBLERS.

Exposition. This cylinder is operated by a push-key of flat steel. The six tumblers used are without springs, and the lock is what is called positive. The opening in the blade of the key permits the passage through it of a lever which is con-

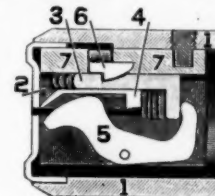


FIG. 2.—SIDE VIEW OF TUMBLERS.

structed so the tumblers cannot be set until this lever has passed quite across the key slot, closing it effectually against any tampering. This device is known as the "Jackson" lock. The manufacturers exhibit it in a variety of styles, among which

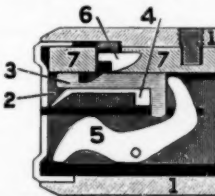
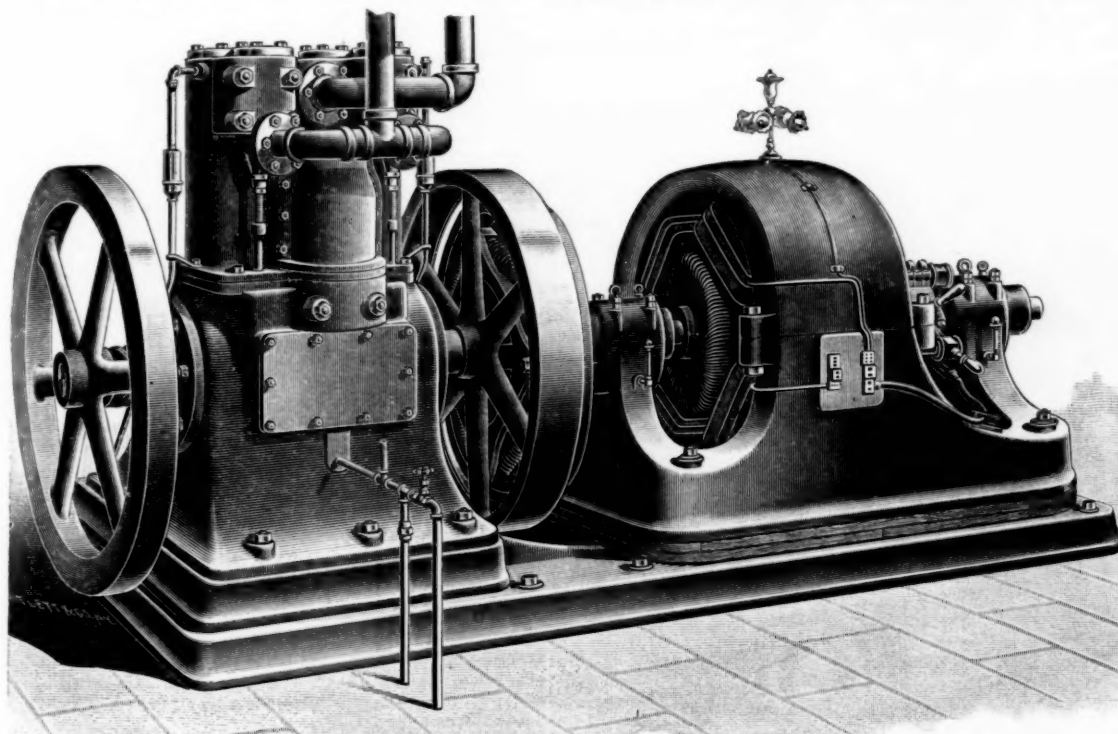


FIG. 3.—SIDE VIEW OF TUMBLERS, LOCKED.

are rim and mortise latches, front and vestibule door sets, safe-deposit locks, post-office lock-boxes, cabinet, drawer, cupboard, chest locks, etc. In these goods the established reputation of this company for excellent finish and workmanship is fully maintained.

MR. W. E. HOLT, of the Wenonah Cotton Mills, at Lexington, N. C., has placed an order with the Pettee Machine Works, of Newton Upper Falls, Mass., for some additional revolving flat cards and drawing frames.



THE PITTSBURG GAS ENGINE.

engine practice is disclosed by the Pittsburg automatic governor, which both regulates the speed and controls the admission of fuel to the cylinder. It is mounted upon the shaft between the cranks, and by direct connection between the eccentric rod and valve stem insures an accurate and positive travel to the measuring slide valve. Though the essential features of the Pittsburg governor have demonstrated their excellence by long-continued use on the steam engine, the Fuel, Gas & Manufacturing Co. is the first to adapt them to the gas engine, and to so improve them as to secure the virtually perfect mechanism which automatically regulates the engines with an efficiency and precision that is as truly remarkable as it is satisfactory.

The gas engine has developed three methods for igniting its fuel, viz, the use of a flame, a heated iron and an electric spark. On account of its liability to blow out, the flame is gradually being discarded by the best manufacturers. The heated iron is more reliable, but clumsy and unsatisfactory. The electric spark is the most desirable device, provided there is no uncertainty as to its regularity of action. The Pittsburg patent spark consists, in brief, of an arm operated

side, within arm's reach of one another. The oil cups are supplied with a sight feed and so placed as to be easily got at and regulated. Both at front and at back the crank chamber has large openings through which the shaft, governor rods, etc., may be reached by the loosening of a bonnet. The interior of the cylinders is similarly easy of access. The head is made removable, thus allowing ingress for an occasional cleaning out of the dirt resulting from gas combustion. By such construction any part of the engine may be removed in a very few minutes, and with no other trouble than that necessitated by the unscrewing of a few nuts.

In order to substantiate the claims made for the Pittsburg gas engine, the following report is presented of a test made by two competent and disinterested engineers. The engine used was of the latest design, rated at a nine nominal brake horse-power, having a 11-inch stroke and a piston six inches in diameter. As will be noticed, contrary to the usual practice, the Fuel, Gas & Manufacturing Co. rates its engines by the brake and not the indicated horse-power, i. e., by the energy obtainable at the band-wheel, which is the only work of any engine available for the buyer.

	A	B	C
Load	Full.	3/4	0
Load on brake in pounds.....	75.8	52.6	0
Revolutions per minute.....	223.5	223.	221.
PRESSURE IN POUNDS PER SQUARE INCH IN CYLINDERS.			
Mean initial } Cylinder I.....	159.	103.	27.4
" " } " II.....	161.	104.	28.
Mean terminal } " I.....	25.	18.8	8.8
" " } " II.....	25.3	19.	9.
Mean effective } " I.....	61.	47.	17.
" " } " II.....	61.5	47.2	17.1
INDICATED HORSE-POWER.			
Cylinder I.....	5.38	3.59	.80
" II.....	5.40	3.62	.82
Total.....	10.78	7.21	1.62
Brake horse-power.....	9.10	5.80	
Horse-power loss in friction.....	1.68	1.41	
Mechanical efficiency.....	84%	80%	
GAS.			
Temperature.....	22.	16.	15.
Pressure in inches.....	1.5	2.	2.
Amount in cubic feet at 0° C. consumed per hour.....	165.	121.8	50.
Amount in cu. ft. at 0° C. consumed per hour per one h. p.....	15.3	10.9	30.8
Amount in cu. ft. at 0° C. consumed per hour per B. h. p.....	13.2	21.	
WATER JACKET.			
Pounds of water used per hour.....	1538.	1210.	1000.
Rise in temperature, degs. C.....	220.2	19.	17.8

HARDWOODS.	
<i>Walnut.</i>	
1/2, Nos. 1 and 2.....	75 00@100 00
4-4, Nos. 1 and 2.....	50 00@100 00
5-4, 6-4 and 8-4.....	55 00@110 00
Nos. 2 1/2, 3 and 4.....	125 00@130 00
Newell stuff, clear of heart.....	125 00@130 00
Culls.....	30 00@35 00
<i>Oak.</i>	
Cabinet, white and red, plain sawed and good 1 and 2, 8 in. and up, 12 to 16 feet long, 4-4.....	35 00@40 00
5-4 to 8-4.....	35 00@40 00
Quartered white, 1 and 2 quality, all figured, 6 in. and up wide, 4-4.....	50 00@53 00
Culls.....	10 00@15 00
<i>Poplar.</i>	
Nos. 1 and 2, 1/2.....	22 00@24 00
4-4.....	27 50@30 50
Nos. 5, 6 and 8-4.....	30 00@32 50
In yellow pine cargoes, log run stock.....	12 00@15 50
Culls.....	11 50@13 50
<i>SHINGLES.</i>	
Cypress, No. 1 hearts, sawed, 6x20.....	7 00@7 25
No. 1 saps, sawed, 6x20.....	5 00@5 50
No. 1 hearts, shaved, 6x20.....	6 00@6 50
No. 1 saps, shaved, 6x20.....	4 50@4 75
<i>LATHS.</i>	
White pine.....	2 75@2 80
Spruce.....	2 60@2 75
Cypress.....	2 15@2 20

Norfolk.

[From our own Correspondent.]

NORFOLK, VA., July 3.

There are many features connected with the lumber trade of this port which are at present very interesting. The uninterrupted demand for yellow pine and the remarkable firmness of values for kiln-dried lumber are unprecedented in the history of the industry. Shipments of kiln-dried lumber are numerous, and at all the mills vessels are busy loading for Northern and Eastern ports. During the past six months the business of this port in lumber was larger than ever known, notwithstanding January last was an off month on account of the ice blockade and the general severity of the weather. The various mills here were never better handled towards a successful production of lumber, and at present all are fully employed, while the same is applicable to nearly all points throughout the milling district of Virginia. Receipts of air-dried lumber have been very heavy of late, and the market has been rather depressed, with values easy and lower, while returns from shipments have been slow and results unsatisfactory. Cypress lumber is in moderate demand, with the supply fully ample to meet all immediate requirements. There is a very spirited demand for dressed stock, and the planing mills are all fully engaged with numerous orders on file at a fair margin of profit.

Kiln-dried North Carolina pine lumber f. o. b. vessel at this port is quoted as follows:

5-4 rift No. 1.....	\$27 50@
5-4 rift No. 2.....	16 00@
5-4 rift No. 3.....	20 00@
5-4 rift No. 4.....	20 00@
5-4 rift No. 5.....	15 00@
5-4 rift No. 6.....	16 00@
5-4 rift No. 7.....	17 50@
5-4 rift No. 8.....	13 50@
5-4 rift No. 9.....	25 00@
5-4 rift No. 10.....	15 00@
5-4 rift No. 11.....	18 50@
5-4 rift No. 12.....	15 00@
5-4 rift No. 13.....	15 00@
5-4 rift No. 14.....	15 00@
5-4 rift No. 15.....	15 00@
5-4 rift No. 16.....	9 50@
5-4 rift No. 17.....	10 50@
5-4 rift No. 18.....	9 00@
5-4 rift No. 19.....	10 50@
5-4 rift No. 20.....	8 50@

In carload lots \$1.00 additional per thousand on Nos. 1 and 2, and fifty cents additional per thousand on No. 3 and box.

Six Months Lumber Business at Charleston.

[From our own Correspondent.]

CHARLESTON, S. C., July 3.

The increased facilities of this port as a lumber market affords dealers an opportunity of placing lumber at advantageous figures and filling orders with dispatch. The general market so far this year is showing an increase over last year's business, while prices continue to rule at low figures for all desirable grades and dimensions. A fair coastwise business has been in progress, while the foreign demand has fallen off. There has been a good demand for local building purposes during the year, and the quantity required during the summer and fall will likely be of considerable volume. Of the total shipments of lumber since September 1, 1892, New York has taken the largest share, Philadelphia second and Baltimore third, other domestic ports having taken 2,403,000 feet.

The tables as given below show the monthly shipments of lumber from this port since January, 1893, to be 31,338,992 feet, and since September 1, 1892, to date, 51,013,221 feet, against 43,422,836 feet for the corresponding period of 1891-92. The shipments of timber during the past week were all to New York, and aggregated 1,059,317 feet, 376,317 feet of which went by steamer and 683,000 feet by schooner.

EXPORTS OF LUMBER FROM THE PORT OF CHARLESTON FOR SIX MONTHS ENDING JUNE 30.

Month.	Feet.
January.....	1,862,900
February.....	5,638,447
March.....	3,894,992
April.....	6,389,993
May.....	7,297,117
June.....	6,255,853
Total.....	31,338,992

EXPORTS OF LUMBER FROM CHARLESTON FROM SEPTEMBER 1, 1892, TO JUNE 30, 1893.

Exported to	1892-'93. Feet.	1891-'92. Feet.
New York.....	38,662,532	27,811,378
Boston.....	1,368,000	1,368,000
Philadelphia.....	4,388,292	6,642,000
Baltimore.....	1,860,000	2,468,975
Other United States ports.....	2,403,000	3,783,000
Total coastwise.....	48,681,824	40,705,362
Great Britain.....	.....	.....
France.....	.....	.....
West Indies.....	2,331,397	1,992,300
South America.....	.....	177,000
Nova Scotia.....	.....	.....
Other foreign ports.....	.....	578,174
Total foreign.....	2,331,397	2,717,474
Grand total.....	51,013,221	43,422,836

The Savannah Lumber Market.

[From our own Correspondent.]

SAVANNAH, GA., July 3.

The general lumber market during the past week has been rather quiet and the volume of trade about as usual for this period of the season. The lumber business so far during the current year has been fairly active, and, with the exception of the depression in trade during January and February, owing to the severity of the weather at Northern ports, the exports have been good. The midsummer trade this year will likely be as large as last, and there is a constant demand for all desirable grades of timber. The situation at all milling sections in this State is very satisfactory, and new timber tracts are being rapidly developed, while the number of mills now in operation are all generally well supplied with orders. The trade in crossties has been active during this season, and shipments have been quite liberal. The commercial advantages of this port will always command a good lumber trade, and while competition on the South Atlantic coast has been very close this year, prices, as a rule, have been very steady. The following table shows the coastwise and foreign shipments from January 1 to June 30, inclusive, with the comparative shipments for 1892:

Month.	1893. Feet.	1892. Feet.
January.....	7,300,560	12,350,992
February.....	8,610,164	9,129,935
March.....	9,160,430	13,078,184
April.....	13,581,000	12,781,000
May.....	14,290,000	11,438,491
June.....	13,282,000	16,066,431
Total.....	66,224,154	74,845,033

The total shipments of lumber from this port since September 1, 1892, to July 1 aggregate 109,737,946 feet, against 118,383,000 for the corresponding period in 1891-92.

Pensacola's Lumber Trade.

[From our own Correspondent.]

PENSACOLA, FLA., July 6.

Among the leading lumber centres Pensacola has held her own during the current year. The timber market has been quite active until recently and at present there is very little doing. The manufacture of sawn timber here has about stopped for the season, and mills that are now running are only filling contracts made some time ago.

All the indications, however, point to a much better trade in the coming fall and winter. Recent sales have been made at an advance, and it is thought the European outlook is improving. The exports of sawn timber for the week ending the 1st inst. aggregated 3,750,827 feet, and for the past six months 61,349,000 feet. The exports of hewn timber amounted to 5,382,000 feet. With regard to the volume of business in lumber, there has been a very satisfactory business for the half year ending June 30, and the demand has been regular, with prices showing a fair margin of profit. From foreign ports there is an improvement compared to last year and the domestic inquiry is also very large. The shipments for the week aggregate 2,300,000 feet, and for the half year ending June 30 they amount to 81,260,000 feet. From the above figures the total shipments coastwise and foreign from this port for the six months ending June 30, 1893, amounted to 147,991,000 feet of lumber and timber.

Lumber Exports from Mobile.

[From our own Correspondent.]

MOBILE, ALA., July 3.

The lumber and timber export trade of Mobile during the six months ending June 30 has been of a fairly average character, and even with the depression in timber during this period the result shows an increase over the commercial year of 1891-92. At the moment the trade of the port in timber is of limited volume, and, owing to the depression of prices in the European markets, there is no inducement for shippers to operate on an extensive scale. The prospects, however, are that a revival in trade will occur about the early autumn, and in the meantime there will be the usual preparations to take advantage of any sudden demand or improvement in foreign markets. The *London Timber Trades Journal* in its review of the timber market says: "From the other side of the Atlantic we have news that the pitch pine trade is dull and prices so unremunerative that the large timber firms are reducing their stocks rather than buy at the risk of further depression. Their condition is mentioned as a very hard one, owing to the low prices on this side, which afford them, so it is said, no adequate return for all their outlay and trouble. If the pitch pine exporter asks for sympathy on this account what shall we say of the importer on this side who has been inveigled into buying cargoes on the supposition that some restraint on the production would be imposed which the combination of traders at the pitch pine loading places so earnestly promised to carry out?" While the timber trade is quiet at the moment, there is a great expansion during the past six months in lumber, and the market is active, with prices firm for all desirable stuff. The growing popularity for pine and cypress has created new markets, and during the year the demand has been from Mexico, the West Indies, Central and South America and Europe, with some heavy shipments to domestic ports. The general lumber and timber trade of the port has been satisfactory, as will be seen from the following figures:

EXPORTS OF LUMBER AND TIMBER FROM THE PORT OF MOBILE FOR THE SIX MONTHS ENDING JUNE 30, 1893.

Month.	Hewn timber. Cu. ft.	Sawn timber. Cu. ft.	Lumber.
January.....	213,213	158,224	6,393,745
February.....	315,116	378,067	6,150,879
March.....	205,950	150,820	8,255,831
April.....	476,948	535,496	10,660,541
May.....	187,547	209,834	5,458,554
June.....	137,911	263,279	8,929,851
Total.....	1,556,685	1,695,720	45,255,411

The total shipments of hewn timber from September 1, 1892, to June 30, 1893, were 2,209,139 cubic feet, against 2,387,861 cubic feet last year. Of sawn timber 2,313,852 cubic feet have been exported

since September 1, 1892, against 1,915,199 cubic feet for 1891-92. The lumber shipments foreign and coastwise aggregate 68,297,195 feet since September 1, 1892, and for the corresponding period of 1891-92 they amounted to 52,529,738 feet. In round figures the grand total shipments of timber and lumber will aggregate for nine months 122,573,195 feet, against 104,166,458 feet for the corresponding period last year.

The Lumber Industry at Beaumont.

BEAUMONT, TEXAS, July 3.

The condition of the lumber industry for the half year ending June 30 in this section of Texas is, to say the least, above the general average. The demand is and has been during the year of a decided character, and while at times it has not been as active as in other years, the general market has been of a healthy tone. The present financial depression, while it has had a partial effect upon certain industries in this State, has not materially checked the volume of trade in lumber. As all indications point to a good crop season, there is every prospect that the demand for lumber and timber during the summer and early fall will receive a greater impulse, and a liberal movement in all branches of the industry is expected. The *Beaumont Journal*, in reviewing the lumber market, says: "At the commencement of July the market is in good condition both as to demand and prices, and there has not for many years been more favorable prospects for a good fall trade. Any serious troubles in the financial world will militate to some extent against a full realization of the present flattering promises for business, but generally Texas and other States buying Texas lumber will realize sufficiently from the large crops made and assured to justify extensive improvements." Stocks of lumber in sight are represented as less than usual at this period of the season, and in the whole long-leaf territory, which includes Beaumont, Orange, Lake Charles and Westlake and the mills on the Sabine & East Texas and Trinity & Sabine railroads, will not exceed 90,000,000 feet. Stocks of lumber in the short-leaf territory are said to be very much reduced, and millmen have orders at least two months ahead of their capacity. The supply of pine and cypress timber has been very much increased by the late rise in the river, and the booms are pretty well filled with logs. The shingle market, which has been very dull of late, is looking somewhat better, and the scarcity of cypress timber has caused a lull in the business. The shingle mills, however, are now in receipt of timber, and are already preparing for more extensive operations, while prices in the near future are expected to assume a firmer tone.

Removal of a Great Manufacturing Concern to the Indiana Gas Belt.

The New Albany Rail Mill Co., of New Albany, Ind., is dismantling its puddling, 10-inch and structural mills, and shipping them to Alexandria, Ind., where a new plant is now in course of erection. The sheet department continues in operation at New Albany, but it will close down in a few days and will be removed to Alexandria. The equipment of the new plant at the latter-named place will consist of two three-high sets of muck rolls, sixteen double puddling furnaces, one 10-inch train, two eight-inch trains, and the old rail-mill train, which will be used as a bar mill. The sheet mill department will be equipped with three sheet trains.—*American Manufacturer, Pittsburg.*

The Alexandria Record reports that the work of erecting the buildings for this great enterprise is in active progress. One thousand hands will be employed at the start, and the number will then be increased up to 2500, making this the greatest ironworking concern in the whole gas belt.

CONSTRUCTION DEPARTMENT.

WE PUBLISH, every week, a list of every new factory, of whatever kind, projected anywhere in the South; every railroad undertaken, and every mining company organized. This information is always fresh, and, by enabling manufacturers to correspond with the projectors of such enterprises before their supplies of machinery have been purchased, is of great value. Manufacturers will find it to their interest to read this department carefully each week.

* Means machinery is wanted, particulars of which will be found in "Machinery Wanted" columns.

✉ In correspondence relating to matters reported in this paper, it will be a favor if it is stated that the information was gained from the MANUFACTURERS' RECORD.

ALABAMA.

Ball Play—Saw Mill.—William Waters has built a saw mill.

Huntsville—Bridge.—Contract for repairs to the Flint river bridge has been let to W. H. Converse, of Chattanooga, Tenn., at \$5000.

Mobile—Candy Factory.—The erection of a candy factory is talked of. The secretary of Commercial Club can inform.

ARKANSAS.

Cascade—Copper and Silver Mines.—M. E. Jones & Co. may develop copper and silver deposits.

Malvern—Lumber Mill.—The Malvern Lumber Co. has put in new machinery.

FLORIDA.

Eau Gallie—Ice Factory.—Mr. Springer will erect the ice factory lately mentioned. A 10-ton plant will be put in.

Fort Meade—Printing Works.—A company has been formed to establish printing works.

Ocala—Washing Plants.—The Ocala & Blue River Phosphate Co. will soon erect eight new log washers.

Pensacola—Electro-plating Works.—John Sherry has established an electro-plating plant.

Tampa.—An act to incorporate the Bay Shore Driveway from Tampa to Ballast Point, passed by the legislature lately, has been signed by the governor; capital \$30,000.

GEORGIA.

Cuthbert—Tannery.—Charles Taunton has built a tannery.

Dahlonega—Gold Mine.—A gold mine is being worked by Virge Moose.*

Springdale—Canning Factory.—F. M. Garner contemplates building a canning factory.

KENTUCKY.

Georgetown—Cigar Factory.—The establishment of a cigar factory is probable.

Glasgow—Ice Factory.—An ice plant is contemplated. Henry Ransdell can inform.

Louisville.—The Boston Co. has been incorporated with a capital of \$3000 to conduct cafes.

LOUISIANA.

Abbeville—Development Company.—The Louisiana Land & Development Co., Limited, has been chartered to encourage manufacturing enterprises, etc. W. D. White is president; Joel Moody, vice-president, and Lon V. Minx, secretary and treasurer.

Chopin—Saw Mill.—The Lake Lumber & Shingle Co. has been formed to operate a saw mill. George Lock is president; J. T. Sandidge, vice-president, and E. F. Wasy, secretary; capital stock, \$60,000.

New Orleans—Graphophone Company.—The Southwestern Graphophone Co., Limited, has been incorporated to deal in patents and inventions, etc. The capital stock is \$12,000. Frank A. Daniels is president; Lyman S. Widney, vice-president, and Frederick W. Henry, secretary and treasurer.

New Orleans—Mercantile.—The Southern Liquor & Tobacco Co. has been incorporated to deal in liquor and tobacco. The capital stock is \$100,000.

New Orleans—Mercantile.—The John L. Byrne Co., Limited, has been incorporated to transact a mercantile business. The capital stock is \$5000, and the incorporators are John L. Byrne, E. P.

Vallee, I. Watson, Jr., L. W. Brown, C. L. Comeaup, G. T. Badeau and F. J. Quinlan.

New Orleans—Commission Company.—The B. M. Wilson Importing & Commission Co. has been incorporated with a capital stock of \$25,000.

New Orleans—Tannery and Shoe Factory.—The New Orleans Shoe & Leather Manufacturing Co., Limited, has been incorporated to operate tannery and manufacture shoes. The capital stock is \$50,000.

MARYLAND.

Baltimore—Brewery.—Certificate of incorporation of the S. Helldorfer Sons has been filed. The incorporators are Jno. P., Nicholas, Frank, Henry and Anna Helldorfer. The old brewery will be operated.

Brunswick—Bridge.—A company has been formed to build a bridge over the Potomac river at Brunswick. Jos. D. Baker, of Frederick, is president.

Georgetown, D. C.—Paper Mill.—Northern parties have purchased an interest in the old paper mill of George Hill, Jr. A new company will be formed and the plant greatly improved with new machinery. Five tons of paper will be made daily.

Lonaconing—Bottling Works.—Leonard Kolmer & Co. have established bottling works.

Ridgeley—Basket Factory.—Rigden & Ramsdell have established a basket factory.

Washington, D. C.—Machine Works.—The Mechanical Composing Stick Co. has been chartered to acquire title to manufacture typesetting machines. R. H. Sanborn, of New York, president; John Gustasson, of Brooklyn, vice-president, and C. J. Bell, treasurer; capital stock is \$150,000.

Washington, D. C.—Asphalt Works.—Thomas H. Thomas, of New York will erect asphalt works in Washington at a cost of \$20,000.

Washington, D. C.—Manufacturing Clay, etc.—The Branchville Clay Co. has been incorporated to mine and manufacture clay, etc. Its capital stock is \$100,000, and Walter H. Webb, of New York, is president.

Washington, D. C.—Ice Factory.—The Fairmont Ice Manufacturing Co. has been incorporated with a capital stock of \$300,000. W. W. De Saville, J. B. Devine, C. C. Duncanson, L. C. Robbins, J. E. Beall and others are the incorporators.

MISSISSIPPI.

Aberdeen—Cotton Factory.—John J. McDonald, R. O. Reynolds and C. W. Gibson have incorporated the Aberdeen Cotton Co. to deal in cotton, etc. The capital stock is \$10,000.

Aberdeen—Mining, etc.—The Anglo-Southern Mineral Trust Co. has been chartered to mine, etc. The capital stock is to be \$1,000,000, and the directors are Francis R. Fava, Jr., Frank B. Jonas and H. F. Dresbach, of Washington, D. C.; L. W. Neff and A. Z. Caravisti, of Rural Retreat, Va.

Port Gibson—Cotton Gin.—Humphreys & Bro. will erect a cotton gin.*

Port Gibson—Cottonseed-oil Mill.—The Mississippi Cotton Oil Co. will establish a 100-ton cottonseed-oil mill. A building has been secured.

NORTH CAROLINA.

Fayetteville—Machine and Tobacco Company.—The United States Cigarette Machine & Tobacco Co. has been organized with Capt. N. W. Ray, president; J. B. Underwood, vice-president, and Dr. J. W. McNeill, secretary and treasurer, to manufacture and sell cigarette machines and tobacco. The capital stock is \$100,000.

Lattimore—Flour Mill.—A roller process flour mill is to be built.

Lexington—Cotton Mill.—The Wenonah Cotton Mills will put in additional cards and drawing frames.

Marines—Saw Mill.—W. N. Marine will add new machinery to his saw mill.*

North Wilkesboro—Stave Mill.—W. E. Lindsay will engage in the manufacture of staves.

Rowan County—Mining, etc.—Samuel A. Smith and Peter Peiffer, of Newark, N. J.; George H. Gill and Edwin W. Hine, of Orange, N. J., and C. Wesley Meyer, of Brooklyn, N. Y., have incorporated the Atlas Mining & Lumber Co. to transact a general mining and lumber business in Rowan county. The capital stock is \$1,000,000. Principal office at Newark, N. J.

Stanley—Cotton Mill.—J. G. Morrison is putting a new boiler in his cotton mill.

Statesville—Tobacco Factory.—J. A. Cooper, H. C. Cowles, W. D. Turner, Charles H. Armfield, M. R. Adams, L. Harrill and B. H. Adams have organized the Fredell Tobacco Co. and will erect a tobacco factory. The capital stock is \$20,000.

Swansboro—Lumber Mills.—J. F. Prettyman, Virginia Prettyman and Charles Palmore have incorporated the Swansboro Lumber Co. to operate lumber mills. The capital stock is \$5000.

Wilmington—Real Estate.—The Pender Loan

& Trust Co. has been incorporated to deal in real estate, etc. The capital stock is \$10,000.

SOUTH CAROLINA.

Barnwell—Cottonseed-oil Mill.—Mike Brown and J. O. Patterson have incorporated the Barnwell Oil Co. with a capital stock of \$50,000.

Bennettsville—Handle Company.—Fred H. Clough, John F. Everett and N. C. Monroe have incorporated the Great Pee Dee Spade & Handle Co., of Marlboro county.

Edgefield—Cottonseed-oil Mill.—The Edgefield Oil Co. has been chartered by Fred Oliver, D. A. Tompkins and R. M. Miller, Jr., of Charlotte; John Oliver, of Atlanta, and Elias G. Graydon, of Abbeville. The company has a capital stock of \$50,000, and will operate a mill lately purchased.

TENNESSEE.

Tom's Creek—Stave Factory.—W. I. Pace will engage in the manufacture of staves.

TEXAS.

Dallas—Printing Works.—George Myers and others have purchased the *Times-Herald* newspaper and printing works. The latter will be enlarged and improved.

Dallas—Real Estate.—J. B. Adoue and Elizabeth Flippen, of Dallas, and J. Lobit, of Galveston, have chartered the Flippen-Adoue Investment Co. to deal in real estate, etc. The capital stock is \$100,000.

Fort Worth—Packing-house, etc.—Boston (Mass.) parties have purchased the Fort Worth Packing, and will greatly improve it. New ice and cold-storage machinery, etc., will be added at once. G. W. Simpson can inform.

Granbury—Grain Elevator.—The Hood County Roller Mills have built a grain elevator.

Hillsboro—Steam Laundry.—The recently reported steam laundry will be operated by Harpold & Jackson.

Index—Saw Mill.—G. A. Garrett has erected a mill for cutting hardwood.

Itasca—Cotton Gin.—R. P. Edrington will erect a cotton gin.

Moran—Coal Mines.—Coal mines may be developed near Moran. Thomas McLachlan can give information.

Port Lavaca—Cold-storage.—Lee Canfield is adding a cold-storage room to his ice plant.

Taylor—Electric-light Plant.—The Taylor Electric Light Co. has put considerable new machinery in its plant.

San Antonio—Publishing Company.—G. J. Stornes, J. H. Tanner, P. H. Harbert, J. R. Morris, Curtis Parish and others have incorporated the Fauquet Printing Co. for publishing purposes.

Terrell—Capital Increased.—The Terrell Cotton Oil Co. has increased its capital stock from \$50,000 to \$60,000.

VIRGINIA.

Alberene—Mining.—The Hamlett Slate Co. has been chartered to mine slate with a capital stock of \$100,000.

Big Stone Gap—Coal and Iron Mines.—The Keystone Coal & Iron Co. has been incorporated to mine coal and iron. The capital stock is \$500,000.

Big Stone Gap—Coal Mines.—The Ayers Coal Co. has been chartered to open coal and other mines. Its capital stock is \$25,000.

Clifton Forge—Machine Works.—A company has been formed to control, introduce and manufacture J. A. Mockley's patent "twin type car coupler." J. A. Mockley, J. C. Carpenter, J. A. Roberts and J. A. Capel are interested.

Norfolk—Real Estate.—The Norfolk Land & Savings Co. has been chartered to deal in real estate, etc. Robert W. Mallett is president; W. C. Cobb, vice-president, and H. T. Smith, secretary; capital stock \$10,000.

Norfolk—Real Estate.—The National Park Co. has been chartered to deal in real estate, etc. Nathaniel Burruss is president; H. L. Smith, vice-president, and Henry Smith, secretary and treasurer; capital stock \$50,000.

Norfolk—Peanut Company.—The Columbia Peanut Co. has been chartered to conduct a peanut business. John L. Roper is president; W. H. Thomas, of Baltimore, Md., vice-president, and Lewis Hornthal, of Plymouth, N. C., secretary and treasurer; capital stock \$20,000.

Richmond—Plumbing, etc.—The Virginia Plumbing & Heating Co. has been incorporated to manufacture and deal in heating and plumbing material with a capital stock of \$5000. G. W. Priddy is president; C. E. Bare, vice-president, and C. A. Huffman, secretary and treasurer.

Vale—Saw Mill.—Logan Davis will erect a new saw mill to replace the one destroyed by an explosion.

WEST VIRGINIA.

Charleston—Gas Works.—B. H. Oxley, Moses W. Donnelly, R. L. Herndon and O. McChaelson,

of Charleston, and F. R. Stewart, of Huntington, have incorporated the West Virginia Fuel Gas Co. to manufacture and sell fuel gas.

Matewan—Planing Mill.—H. S. White is erecting a planing mill.

Morgantown—Handle Factory.—A handle manufacturing company of Monongahela, Pa., may remove its factory to Morgantown. The Morgantown Building & Investment Co. can inform.

Morgantown—Pumping Station.—The Standard Oil Co. will put in a new engine at its pumping station.

Moundsville—Coal Mines.—Pittsburg (Pa.) parties will develop coal mines near Moundsville.

Moundsville—Woolen Mill.—Albert Snape & Bro. will add new machinery to their woolen mill.

Pickens—Brick Works.—A company has been organized to establish pressed brick works.

Pruntown—Flour Mill.—Keener & Powell have contract for a roller process flour mill to be installed at once.

Shepherdstown—Broom Factory.—D. L. Rentsch has started the manufacture of brooms.

Van Clievesville—Creamery.—William McKee will establish a creamery; outfit has been purchased.

Weston—Electric-light Plant.—The Weston Electric Light, Water & Power Co. will rebuild its electric light plant reported in this issue as burned.

Wheeling—Brewery.—M. E. Lally, A. E. Smith, W. H. Ramp, William Maser and A. V. McDonnell have incorporated the Smith Brewing Co. for the purpose of operating the old Smith ale brewery. Their capital stock is \$100,000.

Wheeling—Planing Mill.—Wood Bros. have put new machinery in their planing mill.

BURNED.

Big Stone Gap, Va.—Central Hotel; loss estimated \$5000.

Pickens, S. C.—The Leslie Building; loss over insurance \$4000.

Weston, W. Va.—The Weston Electric Light, Water & Power Co.'s electric-light plant; loss \$15,000.

Vale, Va.—Logan Davis's saw mill destroyed by explosion.

BUILDING NOTES.

Atlanta, Texas.—The Knights of Pythias propose to erect a hall.

Baltimore, Md.—The German Lutheran congregation will build a church on Pennsylvania avenue to be 44x53 feet, of semi-Roman architecture. It will cost \$7000. Address Rev. H. Wiener.

Baltimore, Md.—Hall.—The Vorwärts Turnverein has raised \$10,000 for a fund to build a hall.

Baltimore, Md.—Dwellings.—Edward S. Thompson will erect three three-story houses of brick, to cost about \$12,000, on North avenue.

Clarksburg, W. Va.—The Merchants' National Bank will erect a building and invites bids.

Clinton, Tenn.—Hall.—The I. O. O. F. will erect a hall with store on the ground floor. W. Chamberlin & Co., of Knoxville, are the architects.

Cumberland, Md.—Courthouse.—Brown & Garber, of Wilmington, N. C., have secured the contract for the new courthouse. It will cost \$97,500.

Dallas, Texas—Church.—The new church will cost \$50,000 and seat 1000 people. It will be built of brick and stone. H. L. Kniffin may be addressed.

Decatur, Ala.—Courthouse.—G. R. Williams & Bro., of Knoxville, Tenn., have the contract for roofing the new courthouse.

Florence, S. C.—Church.—The Baptist church building committee has decided to begin work on the new edifice to cost \$10,000. Rev. R. W. Sanders may be addressed.

Geneva, Ala.—Bank.—Tillis & O'Neil are erecting a brick bank building 20x100 feet.

Glenview, Miss.—The proposed school addition will be used for normal classes. Mr. D. Helwick may be addressed.

Holly Springs, Miss.—College.—The North Mississippi Presbyterian College improvements will cost \$5000. The addition to the present buildings will be 47x74 feet. Jones & Hanes, Memphis, Tenn., are the architects.

Inverness, Fla.—School.—The proposed school at Inverness will cost \$5000.

Lexington, Ky.—Block.—Mrs. W. A. Dudley will erect a business block to cost about \$8000.

New Orleans, La.—The Louisville & Nashville will replace its burned freight sheds with fire-proof structures.

New Orleans, La.—James Stewart & Co., of St. Louis, have received the contract for erecting the

300,000-bushel elevator and storage-house to be built for the Illinois Central at New Orleans. The elevator will be for city trade and will contain all modern appliances for cleaning and storing.

New Orleans, La.—Hospital.—The Charity Hospital will be enlarged. Address Edwin Marks, secretary.

Norfolk, Va.—Church Improvement.—The old Granby Street Methodist Church will be improved at an expense of \$10,000. John L. Roper may be addressed.

Palm Beach, Fla.—Hotel.—The Hotel Poinciana will be completed in February. It will be one of the largest hotels in the world and rival the Ponce de Leon.

Richmond, Va.—Bank Improvement.—The building of the National Bank of Virginia will be remodeled and new office fixtures put in.

San Antonio, Texas—College.—The college to be built by the Catholic church will be 198 feet long and three stories high. Rev. F. Feith may be addressed.

Washington, D. C.—Church.—The plans for St. Matthew's Church comprise a structure covering ground 120x175 feet. The shape will be that of a Latin cross, with a dome of sixty feet inside diameter over the intersection.

Washington, D. C.—Dwellings.—E. Francis Riggs will erect five three-story brick dwellings on Riggs street.

Voakum, Texas—Hotel.—A two-story hotel is proposed to be built.

RAILROAD CONSTRUCTION.

Railroads.

Alexandria, Va.—The tracks of the Virginia Midland will be extended to connect with the Mount Vernon electric road.

Asheboro, N. C.—Ten miles of the Raleigh & Western between Egypt and Asheboro have been graded. Many bridges will be required.

Ballinger, Texas.—A railway company with \$2,000,000 capital has been organized to build a road from Ballinger to Abilene, about thirty-five miles south of Ballinger. It will connect the Texas & Pacific and Gulf, Colorado & Santa Fe systems.

Greenville, Texas.—The Sherman, Shreveport & Southern has filed a mortgage for \$3,100,000, made to the Central Trust Co. of New York. The mortgage is to secure funds to extend the road to Shreveport, La., and to Decatur, Texas.

Harper's Ferry, W. Va.—The Baltimore & Ohio tunnel has been cut through a distance of 700 feet. The piers for the new bridge across the Potomac are nearly completed.

Lake Worth, Fla.—The Flagler railway to Lake Worth is completed to Eau Gallie. Track will be laid from Jupiter to Palm Beach, and a steamer will run on the Indian and Jupiter rivers between Eau Gallie and Jupiter to connect with the Palm Beach line.

Louisville, Ky.—The Louisville and Jeffersonville bridge, which the Big Four system is to use in entering Louisville, is to be completed at once.

Marshall, Texas.—It is reported that the Paris, Marshall & Northwestern and the Kansas City, Oklahoma & Texas, proposed lines, may be consolidated. It is reported that the Rock Island system is interested in the construction of the road.

Morgantown, W. Va.—It is stated that the contract for grading the Pittsburgh, Virginia & Charleston, which is to extend along the Monongahela river from Brownsville, Pa., to Charleston, W. Va., is to be let in a few days.

Mount Sterling, Ky.—An electric line twelve miles long to Sharpsburg, Ky., is projected.

Paragould, Ark.—J. F. Hasty writes that the Paragould & Buffalo Island is now called the Paragould & Northeastern. It is now being changed to standard gauge from Paragould to the St. Francis river, a distance of ten miles. It is expected to build a drawbridge across the river in the fall and extend the line two miles further.

Pensacola, Fla.—It is stated that Horace Tucker has been elected president of the Florida Northern, a line proposed to be built from St. Andrew's bay north and west to Apalachicola, a distance of 130 miles. Work has begun on a part of the line.

Roanoke, Va.—The Norfolk & Western is constructing a branch about three miles long on its Winston-Salem division to the Castle Rock Mining Co.'s plant.

Velasco, Texas.—The Velasco Terminal will issue bonds for \$20,000 per mile to extend the road to Arcola, to tap the line running from the Cunningham sugar plantation.

Wilmington, N. C.—The line built from Burgaw to Onslow is to be called the Chesapeake & Carolina. President L. E. Watkins states that it is expected to complete it to Washington, N. C., in about four months. At Washington it will connect with the Washington & Jamesville, a road forty miles long. From Jamesville it is intended to build an extension to the Norfolk & Carolina, by which Norfolk will be reached. The proposed system will form a short line between Wilmington and Norfolk.

Street Railways.

Baltimore, Md.—The last section of the Lake Roland Elevated Electric road to Lakeside Park has been completed. It is two miles in length.

Little Rock, Ark.—John S. Braddock writes that the electric railway extension to the chalybeate springs will be one mile long. The grading is completed.

Macon, Ga.—The Macon & Indian Spring extension has been completed. It is two miles long, and will be operated with electric motors.

Washington, D. C.—A Philadelphia syndicate has purchased the Washington & Arlington electric line stock at fifty cents on the dollar. It is reported the road will be completed over the Potomac and into Washington. Walter V. R. Berry is trustee of the road.

Wheeling, W. Va.—The electric road to be built in towns on the Ohio river opposite Wheeling will enter Wheeling over the Wheeling & Belmont Bridge Co.'s two bridges.

MACHINERY WANTED

If you desire to purchase machinery of any kind consult our advertising columns, and if you cannot find just what you wish, send us particulars as to the kind of machinery needed. We will make your wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. You will thus get all information desired as to prices, etc.

Boiler and Engine.—Humphreys & Bro., Port Gibson, Miss., will want boiler and engine.

Brick Works.—Leak & Son, Guthrie, Ky., will buy a hand repressing machine.

Canning Factory.—L. R. Benjamin, Jacksonville, Fla., will need outfit for cannery about next October.

Cars.—R. A. Ayers, receiver of the Appalachian Steel & Iron Co., Big Stone Gap, Va., wants twenty hopper drop-bottom cars, new or second-hand, standard or three-foot gauge.

Cotton Gin.—Humphreys & Bro., Port Gibson, Miss., want prices on outfit for modern cotton gin.

Edger.—W. N. Marine, Marines, N. C., will need an edger.

Elevator.—Jeremiah O'Rourke, supervising architect, Washington, D. C., will receive sealed proposals until July 25 for new elevator, engine, etc., to be installed at the New Orleans (La.) custom-house.

Engine.—C. B. Jenkins, Charleston, S. C., wants prices on an 80 to 100 horse-power Corliss engine, second-hand.

Furniture Factory.—C. B. Atkin, Knoxville, Tenn., will want a new outfit of machinery for furniture factory.

Laundry Machinery.—I. H. Ford, Clifton Forge, Va., wants prices on full outfit of machinery for steam laundry.

Mining Machinery.—The Harvey Coal & Coke Co. will purchase machinery for coal mining. Address W. L. Wilson, secretary, Sewell Depot, W. Va.

Mortiser.—Kinser & Huddle, Bristol, Va., will want a mortiser next fall.

Pile-driver.—J. F. Hasty & Sons, Paragould, Ark., may want a second-hand pile-driver for use on narrow and standard-gauge railroad.

Piping.—Virge Moose, Dahlonga, Ga., wants some piping.

Pumping Plant, etc.—The Winston Water Co., Winston, N. C., is open to proposals for putting in a system of wells and pumping plant of 1,000,000 gallons daily. Address George W. Henshaw, general manager.

Pump.—Dix, Flippin & Co., Pilot Mountain, N. C., will want a retainer pump.

Rails.—R. A. Ayers, receiver of the Appalachian Steel & Iron Co., Big Stone Gap, Va., wants a lot of second-hand rails in good condition, forty to sixty pounds.

Saw Mill.—I. T. Pilgrim, Pine, Texas, will want a light saw rig.

Saw-mill Machinery.—W. N. Marine, Marines, N. C., will need saw head blocks and carriage.

Tenoner.—Kinser & Huddle, Bristol, Va., will want a tenoner next fall.

Woodworking Machinery.—The Connable Veneer & Lumber Co., Memphis, Tenn., will be in the market for some lines of machinery in sixty days.

The Bullock County Leather & Harness Co., James, Ala., wants to employ a harness-maker, who must own his machinery. Address L. E. Cartledge, secretary.

Tillis & O'Neil, Geneva, Ala., want estimates on iron and glass front for a building 20x100 feet.

SOUTHERN FINANCIAL NEWS.

New Banks.

Wilmington, N. C.—The Citizens' Savings Bank is expected to begin business in a few days with \$25,000 capital.

Americus, Ga.—The Bank of Americus has been placed in the hands of Thornton Wheatley as temporary receiver.

Baltimore, Md.—E. B. Schmidt, carriage dealer, has assigned; liabilities \$34,000.

Baltimore, Md.—The Merchants and Mechanics' Loan and Building Association has been formed with John H. Knoop, president.

Cartersville, Ga.—The Howard Bank, which suspended temporarily, has resumed business.

Charleston, S. C.—The Security Building and Loan Association has been incorporated with Lee Loeb, president; William Jacobs, secretary and treasurer.

Charleston, W. Va.—The Charleston, Clendenin & Sutton will issue \$100,000 bonds to pay its indebtedness and buy rolling stock.

Columbia, S. C.—The 4½ per cent. State refunding bonds, amounting to \$5,250,000, have been paid for by the purchasing syndicate.

Columbia, Tenn.—Comptroller Eckels has levied a 100 per cent. assessment on the stockholders of the Second National Bank. It is to be made in payments July 28, August 28 and September 28.

Dallas, Texas.—The Flippen-Adoue Investment Co., for dealing in real estate, has been incorporated with \$100,000 capital.

Houston, Texas.—Ira P. Jones and others have incorporated the National Loan & Investment Co. with \$30,000 capital.

Iowa Park, Texas.—The Bank of Iowa Park has suspended. Its capital was \$10,000.

Norfolk, Va.—The corporation will pay its 8 per cent. bonds maturing July 1.

Norfolk, Va.—The Mutual Protective Association, for insurance purposes, has been incorporated.

Roanoke, Va.—The corporation has voted to guarantee \$10,000 worth of the Roanoke Hospital bonds.

Troy, Ala.—Chicago capitalists have purchased \$35,000 worth of water works bonds at par.

Wilmington, N. C.—The Atlantic National Bank will increase its capital to \$200,000 and its surplus to \$12,500.

TRADE LITERATURE.

THE B. F. Sturtevant Co., Boston, Mass., has printed a third edition of 10,000 copies of its general catalogue No. 61, which describes the uses of its blowers, exhausters, engines, forges and heating and ventilating apparatus. The company desires to place a copy in the office of every superintendent, purchasing agent, engineer or manufacturer using such machinery.

THE Southern Foundry and Machine Works, of Fredericksburg, Va., has issued a catalogue which gives an excellent idea of the variety of agricultural implements made at this plant. This includes engines and boilers of improved patterns, chilled and cast plows, also plows for hillside work, corn shellers, feed cutters, rollers, saw mills, etc. Two specialties in the stationary engine line are the Progress automatic cut-off engine and the centre crank slow speed engine, which has a reputation for durability and efficiency.

THE Standard Paint Co., No. 2 Liberty street, New York, issues a small but comprehensive pamphlet describing its varieties of papers, which are endorsed by a number of published testimonials. Some of the grades placed upon the market are the P. & B. water-proof building and sheathing papers, the P. & B. dynamite paper, the P. & B. Giant papers, the P. & B. lining and export paper. The building, which has a wide reputation, is very strong and durable and is coated with the P. & B. compound, which renders it impervious to gas and water, also acid and alkaline solutions.

THE Graham Twist Drill & Chuck Co., of Detroit, Mich., explains the advantages of its improved drill chuck in an artistically arranged pamphlet. The principal improvement is the grooved shank system which does away with sockets, sleeves and bushings, and prevents the breaking of flat ends or tenons of taper shanks. The Graham chuck is made with solid jams, and the groove is milled into the round solid steel to a depth sufficient to give the proper spring to the jaws for tightening and releasing the drill by hand. Some of the chucks made by this concern will hold drills from two and a-half to three-quarters of an inch actual size, with length of four inches and two and a-quarter inches outside diameter.

THE Foss Manufacturing Co., of Springfield, Ohio, issue an attractively arranged and illustrated prospectus of its special machinery for crushing, grinding and pulverizing. A series of mills and crushers suitable for any work to which this kind of machinery can be adapted is shown

with interior and exterior views. Some of the mills are built specially for crushing phosphate rock, also for harder material. One specialty is the French burr stone mill, in which the burrs are selected from old quarry blocks. This mill can be easily taken apart so the burrs can be dressed. The Foss Company makes mills which will grind such articles as ashes, clay, coal, cement, cocoonut shells, fertilizers, fire-brick, horn, hops, peas, rice, saltpetre, starch and wheat.

"GEARING AND MACHINERY" is the title of a supplementary catalogue issued by S. Morgan Smith, of York, Pa. It gives a very complete list of measurements and prices of pulleys, couplings, collars, blocks, boxes, wheels, etc. Another catalogue also published by Mr. Smith gives a complete description of Smith's improved Success water wheel. These are on horizontal as well as vertical shafts. The No. 2 wheel gives 50 per cent. more power and uses about 50 per cent. more water than No. 1. One feature of these wheels is that the gates are independent in closing. Thus arranged, the wheel can always be stopped without trouble. The power of the Success wheel is largely due to the use of long buckets which gradually lean forward without any abrupt bend to prevent the force of the flow of water.

The catalogue recently sent out to the trade by the Miller Lock Co., whose plant is at Frankford, Pa., gives an idea of the remarkable improvements made in locks in late years. The Jackson and Champion are among the specialties turned out by the Miller Company. The Jackson is operated by a flat key, and a direct thrust of the key is required in throwing back the bolt. This prevents wear and strain on the tumblers and key, and insures the durability of the lock. The inventor of the Jackson is Charles D. Williams, the noted expert lock "picker." He cannot open his own invention without the key. The Jackson locks are used for rim latches, drawers, store and house doors, cupboards, chests, etc. The Champion keyless locks are made of bronze and brass and work on combinations. They can be used for a multiplicity of purposes. Other specialties of the Miller Company are Champion padlocks, handboxes; also fasteners and locks for bicycles.

TRADE NOTES.

MESSRS. BROWN & GABBER, builders, of Wilmington, N. C., have closed a contract to erect an icehouse 31x92 feet in that city.

THE Gleason & Bailey Manufacturing Co., of Seneca Falls, N. Y., has received an order for a hose carriage from Westchester, N. Y.

THE Gleason & Bailey Manufacturing Co., of Seneca Falls, N. Y., is building a handsome steel-frame four-wheel hose wagon for Navasota, Texas.

L. T. NOYES, of Houston, Texas, general agent for the Diebold Safe & Lock Co., has been awarded the contract for steel cages to be made for the town of Laredo, Texas.

THE Lodge & Davis Machine Tool Co., Cincinnati, Ohio, U. S. A., has just received an order for several of its improved machine tools from the Berlin (Germany) Anhaltischen Maschinenbau Actien-Gesellschaft.

THE Graybeard Medicine Co., of Butler, Ga., has been so successful in its business that the capacity of the plant will have to be increased. The company is making 1000 bottles of medicine and ten gross of pills per month.

PROPOSALS for fire apparatus were opened by the New York city fire commissioners on Wednesday, June 28. The Gleason & Bailey Manufacturing Co., Seneca Falls, N. Y., was the successful bidder for furnishing two large size steel hook and ladder trucks.

THE new machine shop of the Coe Brass Manufacturing Co. will be forty feet wide and 300 feet long, two stories high. The building is designed and built by the Berlin Iron Bridge Co., of East Berlin, Conn., and will be covered with its patent anti-condensation corrugated iron roofing.

THE Covel Manufacturing Co., of Chicago, Ill., publishes in the advertising columns a notice that certain automatic sharpeners, swages, rolls and other file-room machinery are held to be infringements on patents of the Covel Company. Several other claims to patents are now being decided by the courts.

MR. DAN JOH WADEN, director of telephones of Finland, has placed a large order with the Newman Clock & Manufacturing Co. for square regulators No. 1 and electrical detectors of this company's make to be shipped to the above place. Mr. Waden will act as agent for the goods for the Newman Clock & Manufacturing Co. in Russia.

JOHN C. N. GIBBERT, 115 Broadway, New York manufacturer of the swinging hose-rack, has lately furnished racks for the Metropolitan Realty Building, New York city; Hotel St.

Claire, Detroit, Mich.; opera-house, Cleveland, Ohio; Betz Building, Philadelphia, Pa. Racks have been placed also on board the steamship Seminole, Clyde Line.

THE Delbert Engineering Co., Limited, of New Orleans, has secured the agency for the States of Louisiana and Texas of the win "soot sucker," manufactured by the Oliver P. Clay Co., of Cleveland, Ohio. This ingenious machine has already been described in these columns. The Delbert Manufacturing Co. is to be congratulated in securing the territory mentioned.

THE Lidgerwood Manufacturing Co., 96 Liberty street, New York, has shipped to the South Gila Canal Co., near Sentinel, Arizona, what is said to be the largest hoisting and conveying cableway ever built, it being 1500 feet in span, or 150 feet longer than the famous Austin dam cableway. The company recently received an order from Sweden for one of its Miller patent transfers.

THE Litofuge boiler compounds have established an enviable reputation, and the Western business of the Standard Boiler Compound Co. is developing fast. The agent in San Francisco ordered last month 2500 boxes of Litofuge compounds. It is used in that city by the Union Iron Works, Palace Hotel, Edison Electric Heat & Power Co., S. F. & N. P. Railway Co., the cable roads, etc.

EARLY last May the American Ship Windlass Co., of Providence, R. I., furnished three of its "Providence" crank capstans to J. G. & T. L. Smith, of the Columbia Transportation Co., Columbia, Texas. In remitting for same soon afterwards these parties ordered two more of these capstans, saying that they were the best capstans that they had ever used, and that they were very glad to know where to get such efficient machines.

THE Shelby (Ohio) Steel Tube Co. has made such progress in the manufacture of its products that it is now turning out tubing which ranges from one-eighth to two and a-quarter inches in diameter. The smaller size is extremely difficult to make, and the company's English preceptor predicted sizes smaller than three-eighths and larger than one and three-quarters could not be made at the plant. Samples of the tubing sent to the MANUFACTURERS' RECORD show excellent workmanship. The tube company's achievement is another triumph for American machinists.

THE Matthews Tennessee Lumber Co., South Bend, Ind., has introduced to the trade what is termed a traveling saw mill which combines efficiency and ease in transportation. The idea is to bring the mill to the logs at a small expense, and save the much greater expense, in many cases, of hauling the logs to the mill. It is extremely simple in its construction, yet solidly put together. Three men, including the fireman, can operate the mill, and with an engine of from ten to fourteen horsepower, can saw from 4000 to 6000 feet of lumber daily. It can be hauled by the traction engine a distance of twenty miles in six hours and thirty minutes with a consumption of but 500 pounds of coal as fuel. The company publishes an illustrated pamphlet describing the mill which contains testimonials from the Studebaker Bros. Manufacturing Co. and others.

WITHIN the past year the engine manufactory of William Wright, Newburgh, N. Y., has been removed from the extreme south end of that city to the extreme north end, on the banks of the Hudson and on the West Shore Railroad. The new shops are admirably planned and were built especially for engine manufacture. The buildings are of brick and the adjoining grounds cover considerable area. Mr. Wright has been in this business all his life, and years ago was associated with George H. Corliss. In a recent card given to the public Mr. Wright makes the following claim: "In the year 1849 I was in the employ of George H. Corliss. I invented the rotative valve, superintended its construction and applied it to the first engine ever built with this valve." Mr. Wright has made many important improvements in engine manufacture and has many patents. His patent automatic cut-off steam engine with an improved rotative valve gear has been sold and in use for years, and, it is claimed, always gives satisfaction. He also makes a specialty of compound condensing engines, boilers, tanks, etc. Having every facility for turning out quick, large and reliable work, it is not surprising that his business has grown to such large dimensions. Upon application a catalogue will be sent giving all particulars regarding improvements, etc.

PLANS for the new cotton mill for Talladega, Ala., have been prepared and contract for the erection of the building let to Messrs. Z. H. Clardy & Son. The entire plant is to be first-class in every respect, the equipment to consist of the very latest improved cotton machinery. Work on the building will be commenced at once, and is expected to be completed by September 15.

Iron Market Review.

There has been almost no change in the iron market during the past week. Many foundries have shut down for the general cleaning up and repairing customary about July 1, and other users find it hard to meet the wishes of the furnaces to make prompt payment. The situation has its strong features, however. Stocks are short everywhere and sales are generally little over production, so but few furnaces are stocking. If, as is currently reported, some furnaces shut down during this month, the stocks will decrease so rapidly that there is no question but that there would be an advance in price. Some buyers who regard the situation from this point of view are quietly purchasing, so that if a change should come they will not be caught.

In St. Louis there has been a little spirit owing to a number of inquiries from local consumers, but the sales made were small. Prices remain cash f. o. b. St. Louis: Southern coke No. 1 foundry \$13.75 to \$14.00; No. 2 foundry \$12.50 to \$12.75.

Louisville presents nothing new. Sales are few and the general market exceedingly dull. Prices remain cash f. o. b. Louisville: Southern coke No. 1 foundry \$12.75 to \$13.00; No. 2 foundry \$11.50 to \$12.00; gray forge \$10.50 to \$10.75.

The Chicago market rules the same, little business being done. It is thought, however, that the general feeling is better than last week. Prices quoted are cash f. o. b. Chicago: Southern coke No. 2 foundry \$13.00 to \$13.50; No. 3 foundry \$12.50 to \$13.00.

In Cincinnati the market has shown practically no change, though there is generally a better feeling than during last week. Prices remain the same, though plenty of shading is being done. Quotations are cash f. o. b. Cincinnati: Southern coke No. 1 foundry \$13.25 to \$13.50; No. 2 foundry and No. 1 soft \$11.75 to \$12.25, and gray forge \$10.75 to \$11.00.

A Furnace Deal.

Mr. Frank Lyman, of Brooklyn, N. Y., has sold his interest in the Covington (Va.) furnace, the Stack and Dally Ann mines, the Iron Mountain mine, etc., to the Lowmoor Iron Co. for \$400,000. One-third of the stock of the consolidated company is taken in payment. Mr. Lyman and his family already control the Lowmoor stock, and the deal will give him a large majority of it. It is said that Mr. Means, president of the company, will retire next February and be succeeded by Mr. Lyman.

Coal and Coke Notes.

NEGOTIATIONS which have been in progress for some time between Pittsburg (Pa.) capitalists and Moundsville (W. Va.) parties have been closed. The deal involves an extensive tract of coal land near Moundsville which the Pittsburgers will develop fully.

EXPORTS of coal from January 1, 1893, to June 29, 1893, inclusive, as cleared by Wm. Lamb & Co., agents, at Norfolk, Va.:

Number tons exported foreign.....	1,590
Number tons exported coastwise.....	37,440
Total amount for week ending June 29, 1893.....	39,030
Total amount to June 29, 1893, inclusive.....	878,216

Another Texas College.

The educational facilities now possessed by the State of Texas will be greatly increased by the college soon to be erected near San Antonio. To the Catholic Church is due the credit for the enterprise. Rev. F. Feith, who has it under his supervision, writes to the MANUFACTURERS' RECORD that work on one of the college buildings will begin as soon as the plans are completed. This building alone is to be 198 feet long, three stories in height, and accommodate ninety boarders, with rooms for the faculty and classes and a lecture

hall. It will cost about \$70,000. The college, when entirely completed, will consist of a series of substantial buildings, on which fully \$200,000 will be expended. The architect is James Wahrenberger, of San Antonio.

Mexican Notes.

THE agreement between the government and the Tampico Harbor Co. has been modified considerably. The company is given the right to control the jetties for thirty-five years' or until the bonds issued by the government in payment for said improvements are taken up. The harbor company is also authorized to construct and control for eighty-six years abutments, wharves, breakwaters, dikes, docks, skids, marine railroads, floating docks and a railway track to connect the harbor works with the Mexican Central Railway; also to establish lighthouses, buoys, beacons, landmarks, etc., necessary to facilitate the traffic and improve the maritime service of the port. At the expiration of the term of the concession the jetty works will become the property of the nation, and the company will guarantee their permanence for five years longer in perfect condition.

A COMPANY has been formed in the City of Mexico with a capital of \$400,000 to erect concentrating machines in the Pachuca river. The company takes over the old Grenfell concession, and has obtained from the Hidalgo state government a further concession for three years from date of organization. The bed of the Pachuca river is very rich, the result of the drainage into it of the many haciendas that line its banks. Recent assays of concentrate washings gave 750 to 850 ounces per ton. Besides there is silver amalgam in considerable quantities which runs nearly pure silver. Forty concentrating machines, with a capacity of 1600 tons, are to be immediately erected.

THE phosphate industry at High Springs, Fla., is at present very active, and shipments of phosphate are being made in large quantities. Among the mines which are actively employed in shipping are the Royal Phosphate Co., Angle-Florida Phosphate Co., H. F. Dutton & Co., Starling & Willard, Excelsior Phosphate Co., Pennsylvania Phosphate Co., High Springs Phosphate Co., Warde & Willard, Camp Bros., W. F. Simons and Simons & Wright. Nearly all the mines are working up to their full capacity.

THE receiver of the Lone Star Iron Co., of Jefferson, Texas, Mr. W. T. Armstead, filed his inventory on the 24th ult. The liabilities, not including the \$100,000 of capital stock, amount to \$240,000. The assets shown by the accounts are \$1,118,000.

MR. E. W. BAILEY assumed the management of the Dunnellon Phosphate Co.'s business at the port of Fernandina on the 1st of July.

TO THE WORLD'S FAIR VIA B. & O.

The Baltimore & Ohio Railroad has placed on sale at its offices throughout the East excursion tickets to Chicago, good going via Washington and returning via Niagara Falls, with privilege of stop-over at each point. These tickets are valid for return journey until November 15, and are not restricted to certain trains, but are good on all Baltimore & Ohio trains, and permit holders to travel via Pittsburg or via Grafton. By either route passengers cross the Alleghany mountains, 3000 feet above the sea level, amid the most picturesque scenery in America. Sleeping car accommodations may be reserved in advance upon application to nearest Baltimore & Ohio ticket office.

Summer Excursion Tickets

To all Northern and Eastern seaside, lake-side and mountain resorts, to Deer Park and Oakland, the Virginia Springs, Niagara

Falls, Luray Caverns, Gettysburg, and to all other points where people gather in search of health and pleasure, are now on sale at all Baltimore & Ohio ticket offices at greatly reduced rates. These tickets will be sold from June 1 to September 30, and are valid for return passage until October 31. Before selecting your route or resort consult Baltimore & Ohio summer excursion book, in which shortest routes and lowest rates via "Picturesque Baltimore & Ohio" to all resorts are given from points on that road east of the Ohio river, profusely and artistically illustrated. This book can be procured free of charge upon personal application to ticket agents Baltimore & Ohio Railroad Co., or you can have it mailed to you by sending name and address with ten cents in stamps to Chas. O. Scull, General Passenger Agent, Baltimore, Md.

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